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CORD

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YEAR

ARCHITECTURAL



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ARCHITECTURAL RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

Next Month

TRANSPORTATION—by aircraft, railroad and automobile—is the general backdrop against which the October issue will be presented. It has always exerted a direct influence on building design. And today's trend of developments in use and means of transportation suggests a whole new series of building problems in the making.

Such trends and unprecedented requirements will be the subjects of discussion. In a broad survey of the field *Gilmore D. Clarke*—Dean of the College of Architecture at Cornell University and internationally known as a guiding spirit in planning the famed parkway system of New York State's Westchester County—charts the dynamic effect of transportation on building design. And in a significant symposium, leaders of our "mobility industries" will comment specifically on how increasing use of improved trains, automobiles and aircraft may influence the near-future evolution of American towns, cities, homes, and market places.

Among the new buildings planned for publication are a modern airport terminal and a tourist hotel; two strikingly original new ticket offices for the Pennsylvania Railroad; a motor freight warehouse and an auto parking structure—not to speak of houses in which the garage assumes the importance that a motor age demands. Design of all these structures has been molded to the needs of modern transportation; their presentation will offer graphic and stimulating suggestions on the "shape of things to come."

The B. T. Study will deal with technical problems of bus and freight terminal design. Both types of transportation structures are becoming more and more important as our road systems expand and the trend toward urban decentralization becomes more pronounced.

Building's economic front will be covered by another report in the series that started in August and is continued on page 39 in this issue.

VOLUME 90

SEPTEMBER 1941

NUMBER 3

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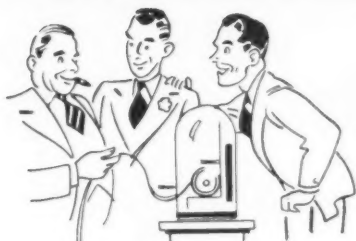
Manuscripts, photographs, and drawings which conform to RECORD'S editorial aims are welcomed. Every effort will be made to return material (if accompanied by stamped, addressed envelopes); but the editors will not be responsible for losses.

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Architect, Paul B. Stevens, Jr.—Acoustical Distributor, Fisher Busse Co.



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BEHIND THE RECORD

Readers' comments constitute the frosting on any editor's cake. Among those that we've received on our new "Architects in Action" series (see page 69) are two that interested us particularly. One, from Robert B. Trivett, Jr., of East Orange, N. J., speaks for the young men on their way up:

There is a strong desire in the architectural graduate of today to know the success stories of practicing architects.

He wants to know their architectural backgrounds: where they traveled, where they were educated, what they found valuable in their formal education, and what their formal education failed to give them.

He wants to know their business background: where they worked upon graduation from school, the relative amount of their first salaries, when they started in business, and the factors that prompted them to start in business for themselves.

And possibly he might want to know their family backgrounds.

Henry Saylor in his current series of articles is attempting to give us the "where, when, and how" of successful practicing architects and their offices. He is filling a long felt vacuum in my architectural education, and I prophesy a most welcome reception, by the profession, of all future articles.

The other, from Samuel E. Homsey, who's part of the subject in this month's story, suggests the value that we hope these reports will have for practicing architects who have already "arrived."

We are not only very pleased to be chosen as one subject in the series of articles, but we too feel that we will benefit immensely from studying the operation methods of other offices. As a matter of fact, we have found ourselves in the past two weeks thinking far more constructively and systematically on steps to take now to improve our efficiency and to make our efforts more effective. You may be amused to hear that instead of copying scrap notes taken on the field or in conference into cumbersome office diaries, we are now taking notes on packages of loose-leaf notebook fillers—small enough to fit in coat pocket and hand bag, putting them directly into their proper books, a book for each current job.

Special plans for the October and November issues have forced us to interrupt this series. So look ahead to December for the next story and

count on reading how a strikingly successful Middle-western firm gets and holds its clients.

Miles L. Colean in his prefabrication story (see page 64) suggests that the architect may have to revise somewhat the basis of his present practice to fit himself into the emerging pattern of a prefabricated housing industry. Frederick G. Frost, of New York, is more emphatic in stating, as head of an AIA Committee on The Architect and Society, that the modern architect must enlarge his scope to function as "master builder" if he is to meet requirements of modern building conditions. In his Committee report Mr. Frost said:

Designing and space planning is only part of the completed structure. Today the economics of a structure is more important than ever, and the mechanical apparatus, such as plumbing, heating, lighting, air conditioning, and acoustics, tends to assume a larger place in the building operation than heretofore. The modern architect should be in a position to

advise on mechanical problems and must be willing to combine technical knowledge, costs, and business ability with talent for designing and space planning.

The architect may then be recognized as the head of a building operation, or the "master builder." These comprehensive services will be sought by companies as well as individual clients, and then, perhaps, even by our Government, thereby tending to keep Federal bureaus as fact-finding organizations instead of usurping the functions of the architect.

Burned clay masonry being one of the oldest of building materials, you might think that 5,000 years had pretty well exhausted all the possibilities for using it in any sort of fresh new forms. But the buildings shown on pages 41-63 expose that fallacy. Each is surfaced with brick yet each has a distinctive contemporary treatment. From the huge Coffman Union to the modest little church in Seattle, Washington, brick masonry has been used with respect to its tradition but with originality and appropriate directness.



"I'm going to ask the architect to reexamine our lines of flow—I'm tired of hearing her shout 'Gangway' all the time."
—Drawn for the RECORD by Alan Dunn

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• Architect Wm. H. Harrison specified Plyform for both the exterior and interior surfaces of the beautiful Lou Henry Hoover School in Whittier, Calif. The J & B Construction Co. was the contractor.

• The photograph below shows clearly the flawless beauty of the interior walls. There was no plastering. Paint was applied directly to the concrete.

There is a grade or type of this "modern miracle in wood" for every building purpose!

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• The cut-outs around the individual play yards in the Jennie Baker Tucker School, El Monte, Calif., are in panels of EXT-DFPA, the type of plywood made with a water-proof bond for permanent exterior use. T. C. Kistner, architect.



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WITH RECORD READERS

Propose Architects' National Exhibition

A NATIONAL EXHIBITION, which would illustrate the complete function of the architect in the emergency and post-defense periods, has been proposed to *Richmond H. Shreve*, president of AIA, by *A. Appleton*, president of the Northern California Chapter of the Institute, and *Frederick H. Reimers*, president of the State Association of California Architects.

"We heartily indorse the view," wrote Presidents Appleton and Reimers, "that a concerted and unprecedented effort must be made by the profession to insure the survival of the architect during the present national emergency and the post-defense period. . . ."

"The Royal Institute of British Architects, recognizing a similar situation in Britain, is taking concerted action despite the stress of war conditions and has appealed to us to do likewise. The RIBA is devoting special attention to modern exhibit techniques as a potent weapon of public information to this end.

Should portray all phases

"In the United States, architectural groups have presented various highly interesting exhibits which, however, deal in the main with only one phase of architecture—residential work. An exhibition of this type should portray the architect's function in relation to city, regional and national planning, immediate and post-defense; national defense projects; defense housing and civilian defense; public works and industrial structures; public and commercial buildings; civic housing projects and private residential work, the basic objective being to emphasize the little appreciated importance of the architect as "layout" expert, designer, planner and co-ordinator under immediate and post-defense conditions.

"We consider that a national exhibition, to be named "America Today and Tomorrow," should be presented by the AIA in co-operation with the Producers' Council."



"Flight from Foreign" by Edward Anthony, Detroit, Mich., was awarded major prize of \$200 in the 17th Annual Nation-wide Soap Sculpture Competition

RIBA Needs American Publications

THE AIA Committee on Foreign Relations, under the chairmanship of *Philip L. Goodwin* of New York, is studying ways of responding to an appeal from *Edward Carter*, librarian of the Royal Institute of British Architects, for American publications containing information on defense building and the problems of reconstruction.

Mr. Carter, writing from London, suggests either an interchange of publications or the establishment of a fund by American architects. In his letter, addressed to *Charles T. Ingham* of Pittsburgh, secretary of the Institute, he says:

"We are finding great difficulty in obtaining American publications relating to building and planning just at a moment when more than ever the closest possible collaboration is needed.

"My purpose is to discover some means by which we can organize an interchange of publications on a larger scale, or, as an alternative, to study the possibility of starting a publications fund in the United States."

Conventions

MICHIGAN Society of Architects, in convention together with the Producers' Council, Aug. 7 to 10 at Mackinac Island, voted to request the Governor of Michigan, The Hon. *Murray D. Van Wagoner*, to use his influence through his recently appointed liaison officer in the Capitol at Washington, D. C. toward "a more equitable solution" of the materials problem than the steps which the Federal Government has taken toward the drastic reduction of private building.

Alden B. Dow, architect, asserted that the defense emergency will be productive of important progress in new materials and methods.

It is incumbent on those interested in the continuance of private construction during the emergency to give all possible aid in conserving the materials essential to defense construction, *David E. Anderson* of Marquette declared. "Conservation of a most essential material can be accomplished through use of the highest authoritatively recognized stresses for structural and reinforcing steel, as yet adopted in only a few building codes," he suggested.

Speaking on the employment situation, *Branson V. Gamber*, past president of the Society, said that architects' offices are faced with a shortage of help. He outlined steps that may be taken to recommend draft deferment for key men.

Talmage C. Hughes, chairman of the Institute's Committee on Public Information, submitted a report emphasizing the growing appreciation of the need for publicity in the architectural profession.

* * *

ARCHITECTURE in the national defense program, influence of post-war conditions on the profession, small house and speculative house building, architectural service and legislation will be discussed at the annual convention of the New York State As-

(Continued on page 12)

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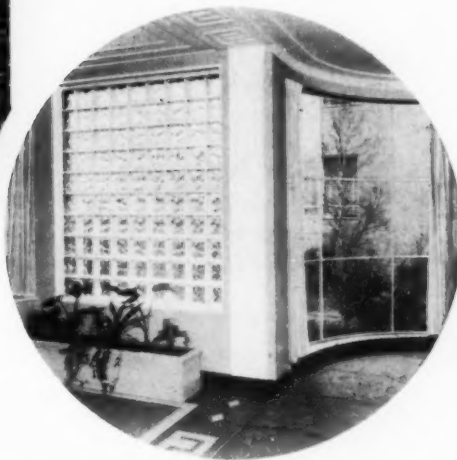
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PC GLASS BLOCKS were generously used in the attractive new Westmore Apartments, New York City. Adding to the good looks of the lobby as well as increasing the amount of daylight which enters it, panels of glass blocks were alternated with clear glass casements.



COMBINING PRACTICAL QUALITIES of insulation, easy cleaning, and protection of privacy with their light-transmission and appealing appearance, PC Glass Block panels are becoming increasingly popular in every type of construction. This panel was attractively placed in juxtaposition to a bay window looking out on the garden of the apartment.

WITH RECORD READERS

(Continued from page 10)

sociation of Architects, to be held at the Hotel Syracuse, Syracuse, October 16, 17 and 18. Professor L. C. Dillenback of Syracuse University heads the convention committee.

* * *

TEXAS Society of Architects will hold its second annual convention at the Baker Hotel, Dallas, October 2, 3 and 4. Exhibitions are planned of the work of the members, in graphic form, and of new building products.

Course in Industrial Architecture

"INDUSTRIAL ARCHITECTURE in the United States has reached a point of development which easily ranks it high among our architectural achievements," said Dean George S. Koyl of the School of Fine Arts, University of Pennsylvania, in announcing inauguration this month of a program of special training in industrial architecture. "By meeting the problems of the industrialist, American architects today are producing better and more efficient buildings in this field than anywhere else," he added.

"But," the Dean continued, "the proportion of architects interested in industrial architecture is not commensurate with the quantity of this type of work being done."

The industrial architecture curri-

culum will combine requirements of the regular architectural program with courses in the Wharton School of Finance and Commerce and the Towne Scientific School.

* * *

DEFENSE SUBJECTS, such as structural air raid precautions, industrial camouflage and defense housing, as well as the more established branches of architecture, will constitute a year of graduate study to be offered at Pratt Institute, Brooklyn, N. Y., beginning this month. The course is announced by C. C. Briggs, supervisor of the architectural department, as a refresher in the latest architectural development, open to professional architects.

* * *

THE SCHOOL OF DESIGN, Chicago, entering its fourth year, will open its Fall semester September 23. Training in Architectural Design and Engineering will be under the direction of George F. Keck, assisted by A. A. Sayvetz and R. B. Tague.

* * *

OPERATED JOINTLY by the Metropolitan Chapters of the Federation of Architects, Engineers, Chemists and Technicians, the Federation Technical School, 3 Beekman Street, New York City, announces the opening September 8 of its seventh year as a co-



WALTER BAERMANN, newly appointed head of the new department of Industrial Design at the Cranbrook Academy of Art, Bloomfield Hills, Mich. Founder in 1937 and director until this summer of the California Graduate School of Design in Pasadena, Mr. Baermann's American experience includes work with the design organizations of Joseph Urban, Norman Bel Geddes, Henry Dreyfuss, Howe and Lescaze; educational director of the Springfield (Mass.) Museum of Fine Arts; consultant to Boston and Worcester (Mass.) Art Museums; and private practice

operative, non-profit post-graduate school for architects and engineers. Among the courses will be a special course on New York's Building Code.

(Continued on page 14)



WELLESLEY HIGH SCHOOL, Wellesley, Mass. Perry, Shaw & Hepburn, Architects, Boston, Mass.

WILLIAMSBURG POWER STATION, Brooklyn, N. Y. Stone & Webster, Engineers, Boston.

HOPEWELL HOUSING PROJECT, Hopewell, Va. Carneal, Johnston & Wright, Architects, Richmond, Va.



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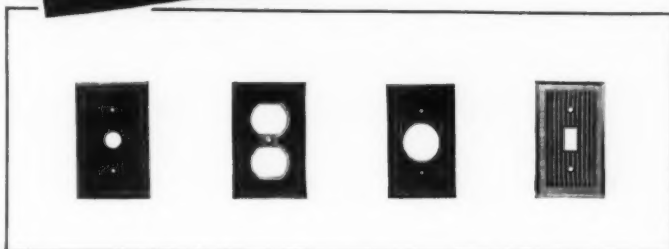
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UNIVERSITY SOLVES HEATING PROBLEM IN NEW BUILDING

Northeastern "U" Meets Varied
Heating Needs by Installing
Webster Moderator System

MINIMUM STEAM CONSUMPTION

College of Engineering Located
in new Richards Hall Operates
on the Cooperative Plan

Boston, Mass.—The beautiful new Richards Hall erected in 1938 on the campus of Northeastern University presented a problem in heat distribution that was solved by the installation of a Webster Moderator System of Steam Heating.

Richards Hall is used for a wide variety of purposes—administrative offices, lecture halls, classrooms, laboratories, recreation rooms, machine shops, lunch room and chapel. The Webster Moderator System provides the proper temperature in each room and in each section of the building with minimum steam consumption.



Richards Hall, Northeastern University,
Boston, Mass.

A Webster Outdoor Thermostat automatically adjusts the basic rate of steam delivery with every change in outdoor conditions.

Among other schools located in Richards Hall is Northeastern University's famed College of Engineering, the students of which alternate regular periods of classroom instruction with supervised employment in industry. Three hundred industrial concerns cooperate with the University in making this program effective.

V. J. Kenneally Co., of Boston, served as the heating contractor. There is a total of 32,354 square feet of installed direct radiation.

Richards Hall was designed by Coolidge, Shipley, Bulfinch and Abbott, well-known Boston architects. Charles T. Main, Inc., served as Consulting Engineers.

WITH RECORD READERS

(Continued from page 12)

Bureau of Urban Research

To COLLECT, organize and analyze existing data on the problems of cities will be the purpose of the Bureau of Urban Research recently established at Princeton University. An advisory committee supervising the project will be composed of the following architects, engineers and authorities on housing and city planning: *Walter C. Behrendt*, Buffalo architect and city planner; *Jay Downer* of New York City, parkway engineer; *Charles W. Eliot*, National Resources Planning Board director; *Arthur C. Holden* of New York City, architect and land utilization expert; *Lewis Mumford* of Amenia, N. Y., critic; *Alfred Rheinsein*, former chairman of the New York Housing Authority; *Winfield W. Riefler*, economist of the Institute of Advanced Study; and *Stephen F. Voorhees* of New York City, architect, World's Fair executive and national defense consultant. *Melville C. Branch, Jr.*, formerly engaged in special studies for the National Resources Planning Board, is director.

Voice of the Architect

CONCLUDING one continuous year of weekly radio broadcasts, the Southern California Chapter of AIA has tabulated the results and finds them highly successful.

More than \$2,000,000 worth of leads were distributed among architects as a result of the broadcasts, according to *Walter R. Hagedohm*, who prepared the program. Bulletins given to the public on request totaled 70,000 copies, with a mailing list of more than 1,200. Southern California architects, Mr. Hagedohm says, discovered opportunities in the small home field when the small home owner discovered the architect. Architects interviewing prospective clients who had listened in on the broadcasts met with better understanding of their function and found it easier to obtain the proper fees.

Relations of the Association with financial institutions and FHA have been improved, it is felt, and more cooperation is being observed from city and county governing bodies.

(Continued on page 15)



While Younger's Restaurant, Chicago, remodeled its main floor and basement restaurants, Architect *James F. Eppenstein* covered the plate glass front with blueprints of the job, invited the public to drop in and inspect the plans laid out on a large drafting table. Business went on as usual while remodeling proceeded, and the management found that interest in the blueprints offset any possible inconvenience for patrons.



Minwax Flat Finish used on walls and panels in library and bar.

Architects:
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Houston, Texas

Painter:
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You know how difficult it is to explain to a painter the exact color you want for true early American paneling. Ipswich Pine is the answer! All the painter has to do is open the can and go to work. Comes ready for use. Handles easily—saves labor.

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Send for color card showing the full range of Minwax colors for paneling, trim and floors. Just write to Minwax Co., Inc., 11 West 42nd Street, New York.



WITH RECORD READERS

(Continued from page 14)

Scholarships

EDWARD LANGLEY SCHOLARSHIP awards for 1941 of the American Institute of Architects have been announced as follows: To *Henry Darbee*, New Preston, Conn., \$600, for travel and research to prepare an analysis of design. To *Herschel A. Elarth*, Norman, Okla., \$300, for study and a survey of defense planning. To *Roy S. Johnson*, Long Island City, N. Y., \$600, for research in standardization trends in housing and relation of the architect to such standardization. To *Donald Monson*, Chicago, Ill., \$600, for study of forces behind the urban pattern of Illinois. To *Marion Dean Ross*, New Orleans, \$500, for travel in Central and South America to study Spanish Colonial architecture, results to be used at Tulane University. To *Roland Clyde Terry*, Seattle, Wash., \$800, for travel in South America and collection of photographic and written data on contemporary South American architecture.

Exhibitions

THE PHILADELPHIA MUSEUM OF ART has in preparation for distribution after October 1 a group of exhibitions in which is included "Architecture for Rent," offered in collaboration with *William N. Taylor* and *George Howe*. Information on the circulating exhibitions may be obtained from *E. M. Benson*, Chief, Division of Education.

* * *

"THE WOODEN HOUSE IN AMERICA" is the subject of a traveling exhibition of the Museum of Modern Art, New York, which will be shown at the Museum from October 5 to October 26.

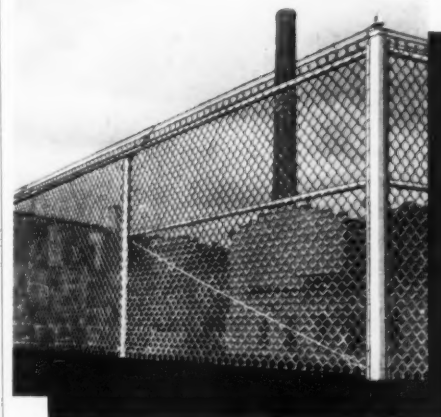
* * *

ON OR ABOUT September 10 the Gallery of Modern Art will be opened to the public at 18 E. 57th Street, New York City. President of the new company, which will show the works of leading contemporary artists throughout the world, is *Jacques Lindon*, who conducted the *Raphael Gerard Galleries* of Paris,

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NEWS FROM WASHINGTON

PRIORITIES AND MATERIALS PLANS FORMING

Substitute materials . . . Defense public works . . . FHA bill passes . . . Rent legislation . . . Effect of price factors
—By KENDALL K. HOYT

PLANS for priority ratings to give defense housing a preferred status are yet in formative stages. It is understood that the facilities of the FHA field offices will be the main part of the machinery which has not yet begun to operate.

Assistance is to be given only in specially designated defense areas and only for houses selling for \$6,000 or less; in the case of rental projects, for units renting at \$50 per month or less. The projects must be suitable for occupancy by defense workers, who must be given reasonable precedence.

Ratings are not to be given in advance. In other words, builders must use initiative, scratch around for materials, and ask for help only when they really need it. The priorities plan calls for the eventual elimination of metals so far as possible. The squeeze on materials will be progressively more severe as new plants, built over the past year, go into production on war orders.

Substitute materials

There has been a good deal of talk but no hard and fast rule set in Washington over the past month as to the substitutes best to use in place of materials in which shortages are developing. If Federal agencies put too much stress on any given substitute, they run the risk of a buying wave which will bring a scarcity in that too.

Beyond the items named by USHA and listed in our report of last month, suggestions which are current here mainly are in the nature of deferring dispensible features in home building for later addition. Relatively minor things, mostly, like elimination of screens; garages; deferment of extra plumbing fixtures; plastics for

door knobs; circulating heaters to eliminate piping; showers instead of bathtubs; storm windows instead of weatherstripping; postponement of garages; and the like, with emphasis on saving metals. USHA is recommending heavier insulation to save fuels in home heating.

Lack of metal cabinets is especially acute in the housing field, and there is a great demand for wooden ones. This, incidentally, looks like a good sideline for enterprising architects with a flair for design. Lumber yards and mills are enjoying a good business in kitchen cabinets and other built-in items.

Linoleum and cork insulation are short. Household equipment such as stoves and refrigerators may be expected to be subject to production curtailment. Lighting fixtures may come without nickel and chromium trim. All these things affect the architect's specifications. But it is easier to sell hard-headed builders on innovations—plastic bathtubs, and all sorts of new items—that they would not look at before because they did not have to.

Price factors affect housing

Housing has not been adversely affected by shortage of materials, but resultant increase in building costs in certain localities is giving some concern. A given house can be built. But if substitute materials have to be used, they are likely to be more costly than those they replace. Otherwise they would have been used all along. If wire mesh is unavailable, the builder cannot use stucco walls and has to consider lumber or brick.

Prices, of course, are now on the upturn generally despite methods of voluntary control, since there is no effort to check the rise of wages and

farm products. Price legislation cannot be expected to be a full solution. The general wholesale level is expected to rise 8 or 10 per cent by the end of the year.

Rent legislation

Powers for rent control are included in the Emergency Price Control Bill filed by Senator Glass and Representative Steagall, chairman of the Banking and Currency Committees of the Senate and House, respectively. In its present form, the rent provisions are rather simple. They give the President power to fix a rent ceiling in communities where he can state a reason for so doing.

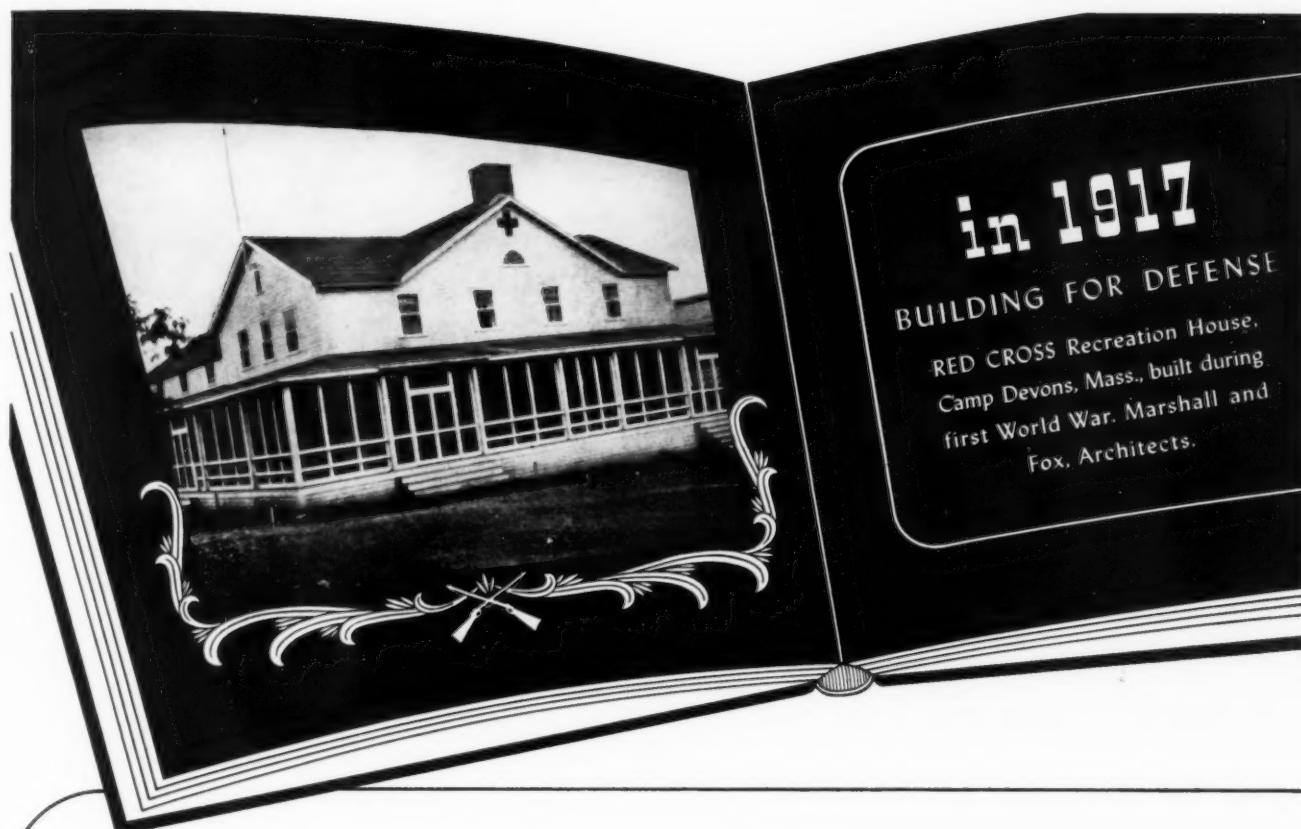
The authority would be in the low-rent field—houses renting for \$15 per month per room or less as of September 1, 1940. A rise of 10 per cent up to the date of enactment of the bill would be grounds for crack-down.

This measure must be viewed as a possible deterrent to speculative building, but also a stabilizing factor in the housing field, aimed as it is against inflation. With rising costs and wages, and with money being taken out of consumer buying by taxes, government bond sales, and higher living costs, it is to be doubted that civilian housing, though on the upturn, can expand nearly in proportion to the growth in industrial activity. But volume is still heavy. Demand is created by the increased marriage rate. Curtailment of auto production may divert funds into housing. And there is always encouragement in the reflection that any delay in building now is likely to result in a post-war housing boom.

Defense housing funds

Legislation has been introduced to double the Lanham Act authorization, thus far \$300 million, by granting an additional \$300 million in authority for housing in defense areas. The bill is still pending before the House

(Continued on page 18)



in 1917
BUILDING FOR DEFENSE
 RED CROSS Recreation House,
 Camp Devons, Mass., built during
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 Fox, Architects.

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 INFORMATION





DOUBLE-WHITE house, Darien, Conn., prize-winner House Beautiful's small house competition. Architect: George T. Gillette, New York City.

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Guest House, Brookfield, Conn. Paints: Cabot's Gloss Collopakes in Haddam Barn Red; trim, DOUBLE-WHITE. Architect-owner: B. A. Bugbee.



DOUBLE-WHITE house with Gloss White Collopake blinds and trim. Chestnut Hill, Mass. Architect: Miss Eleanor Raymond, Boston.

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NEWS FROM WASHINGTON

(Continued from page 16)

Committee on Public Buildings and Grounds. This provides for 75,000 more units whereas officials asked for 125,000.

Meanwhile a warning that the Government will take over the job of defense home building if private industry fails to do its part has been sounded by John H. Fahey, Chairman of the Federal Home Loan Bank Board. More than \$660 million has been loaned by savings and loan associations of the Federal Home Loan Bank System in defense localities, he declared.

In some areas where new workers have crowded in, Mr. Fahey said, private industry has been equal to its task. But building has lagged in some areas. The presidents of the 12 regional Federal Home Loan Banks recently conferred in Washington with the Defense Housing Co-ordinator and are urging institutions affiliated with their banks into greater activity.

Now that Congress has decided not to let the draftees go home and defense plans continually expand, another spurt of cantonment building activity is to be expected.

FHA Title VI gets more funds

Congress has sent to the White House a bill upping the FHA authority under new Title VI, adopted last Spring, from \$100 million to \$300 million. The purpose of the Title is to stimulate defense home building by private industry by insuring high percentage loans directly to the builders rather than only to the ultimate home owners, as was the previous policy.

Builders can get insurance up to 90 per cent of appraised value of the properties. Mortgages are limited to \$4,000 for single-family houses; \$6,000 for two-families; \$8,000 for three; and \$10,500 for four. Most of the projects are single-family dwellings.

The builder holds the note until the householder can assume obligation. He can sell or lease. The usual arrangement is a deferred payment plan whereby the householder builds up equity through monthly payments until he has met the down payment and can take over the mortgage. The first \$100 million is nearly used up. The authority is limited to defense areas, of which over 200 have been designated by the President on recommendation of Defense Housing Co-ordinator Palmer.

FHA also is promoting a "repairs for defense" program to encourage the improvement of existing properties for occupancy by defense workers. FHA is distributing order blanks and literature to dealers to make it easy for property owners to make application.

The U. S. Housing Authority announces that 106 new local housing authorities were created in the first half of the year, raising the total to 623 as of July 1. Only 5 of the big cities are now without them. State laws in several instances have been revised to make public housing possible.

Defense public works

Applications for Federal aid in building public facilities in defense areas where municipal schools, hospitals, sewers, and waterworks are inadequate, already far exceed the \$150 million provided in the Lanham Bill which passed a few weeks ago.

Nearly \$400 millions are involved in formal proposals thus far received by the Public Works Agency and informal proposals bring the total above the half billion mark. The first allotment, involving some \$6 million, was made last month for 26 projects in 12 States. In 11 of these jobs, the local sponsors will bear part of the costs while the Federal Government pays all in the remainder.

Recreation centers for men in military camp areas are among the items for which grants are being made.

ARCHITECT'S QUIZ!



HOW WOULD YOU ANSWER THESE QUESTIONS?



**THE CORRECT ANSWERS BY
RECOGNIZED AUTHORITIES**

1 WHY DOES VAPOR ACCUMULATE IN STUD SPACES TO CONDENSE INTO MOISTURE AND FORM FROST?

2 HOW CAN CONDENSATION WITHIN WALLS BE CONTROLLED?

3 WHAT MODERN METHOD OF CONSTRUCTION WILL SCIENTIFICALLY SOLVE THE CONDENSATION PROBLEM IN BUILDINGS?

1. "When vapor accumulates within any section of a wall, in the form of moisture or frost, it indicates that vapor is travelling to that section at a greater rate than it is travelling from it."*

*Bulletin No. 17, University of Minnesota
F. B. Rowley, Director, Eng. Experiment Station*

2. "Condensation . . . can be controlled by sealing the warm side of a wall, ceiling or floor and allowing the cold side to 'breathe'."*

Building Supply News—April, 1938.

3. "Insulite's Approved Wall of Protection — because Sealed Graylite Lok-Joint Lath, with an asphalt vapor barrier on the stud side, effectively retards vapor travel; and Bildrite Insulating Sheathing outside permits whatever vapor may escape the vapor barrier to pass on to the outside air."*

* A transcription of these and other experts' opinions on the condensation problem will be sent you on request. Address Insulite, Department AR91, Minneapolis, Minnesota.



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TRENDS IN BRIEF

NEEDED: SOUND WORKING KNOWLEDGE ON BOMB SHELTERS

IF ONE TOKEN BOMB were dropped on a building in an American city, and a tenth of an architect's former clients came in half-panic for advice, what service, based on sound working knowledge of materials and methods of construction of bomb shelters, could the architect give?

Such is the question posed by Horace W. Peaslee, chairman of the Air Raid Protection Committee of the Washington, D. C. Chapter of AIA, in a report to the Institute in which he urges widespread action in preparation for such possible emergency.

Mr. Peaslee points out that this is not the time for unrelated individual efforts. "What was current yesterday is obsolete today. For the first time in history we are at the threshold of a national emergency in which not only normal processes of living are subject to change without notice but the lives of civilians may be in jeopardy.

"The architect," he continues, "may be held accessory to wholesale slaughter if he hands out the wrong prescription. There are numerous painful reports from Spain and England reciting tragic faults of design and construction—single exits blocked and constructions which bombs disobligingly hit in unexpected places. Recently, 500 Chinese died when a ventilating system failed to function.

Demand for technical services

"You may feel it could not happen here, but almost simultaneously a proposal was advanced to obtain subways for rapid transit by playing on the fear of raids and by touting these subways as adequate air raid shelters—in Washington, of all places, where soil conditions are receptive to bombs to a depth of perhaps 50 ft. or more, precipitating terrific concussions from confined explosive forces.

"We all hope that such life and death emergencies may not develop this side of the Atlantic, but the demand for technical services may well develop even if the actual need does

not become acute. Whether for professional practice or public service, the study of techniques and special constructions is the crux of the architect's potential contribution in time of emergency, and the saddle on which he may ride a crisis."

The report outlines ways in which the Air Raid Protection Committee of the Washington Chapter is addressing itself to the tasks of general preparation for the problem: What can Roger K. Brasstacks, architect, advise the proprietor of the Louzee Emporium to do to protect his employees and customers?

Having available for reference hundreds of writings on the subject of ARP work, the Committee is holding a series of round table discussions on specific problems. One has dealt with the adaptation of parking garages for shelters, with exploration of costs and of the possibility of working out subsidy bases to stimulate this type of dual purpose structure. Major undertakings of this type, the report states, are pending in San Francisco and other cities.

Several plans of department stores have been contributed by local merchants and pooled for clinical discussion. A study of housing projects is current. These and others—residential, institutional, commercial and industrial buildings—are being worked over by one group as though they were office jobs.

Another group is studying the requirements and possibilities of evacuation camps—the types of shelters required, their adaptability for educational and recreational purposes and the applicability of British, French, CCC, Forest Service, National and State Parks, Soil Conservation Service and NYA findings.

"These are specific problems to whet the interest," Mr. Peaslee sums up, "but there is much spade-work to be done by American architects before they will be satisfied to accept ex cathedra rulings as to right and

wrong procedures. They want to know more about the behavior of construction materials and methods when subjected to new conditions of bombing and conflagration; about the 'splintering' of concrete, the feasibility of brick masonry; about protection from glass; about wholly new factors of vacuum, suction and concussion, and about special measures required in connection with new work, stabilization of existing structures, rehabilitation and demolition.

"The Technical Secretary of the Institute, Theodore I. Coe of Washington, D. C., is co-operating in organizing this phase of preparation and in reorganizing a study of factors of safety.

Should have situation in hand

"Another phase of study is concerned with general factors which bear on all types of ARP technical problems, ranging from data on demand and need, on integration of planning, to subsoil conditions and bird's-eye camouflage. Certainly we must study dual use possibilities, to justify the expenditures involved, and must investigate what may happen to building services and utilities.

"And will the architects take what is handed to them about blackouts, with their demoralizing influence and their futility against incendiary flares, or will they satisfy themselves about the feasibility of the 'lights on' alternative?

"Shall building codes be set aside in such emergencies, increasing future complications, or shall they be reshaped to meet the new need without letting down the bars? Planning and zoning laws will need reconsideration, and if legislation is enacted here, as abroad, requiring protection of tenants and employees, the architects should have the situation in hand before they find themselves at the receiving end. Again, these are not dim and distant possibilities, if \$100 fines and thirty-day jail sentences provided by current ordinances are any index."

(Trends in Brief continued on page 22)

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HOW WATER COOLED ROOFS
ARE CONDITION WINDOWLESS
FACTORIES



HOW PRESSURE-TREATED
TIMBER CAN CUT
CONSTRUCTION COSTS

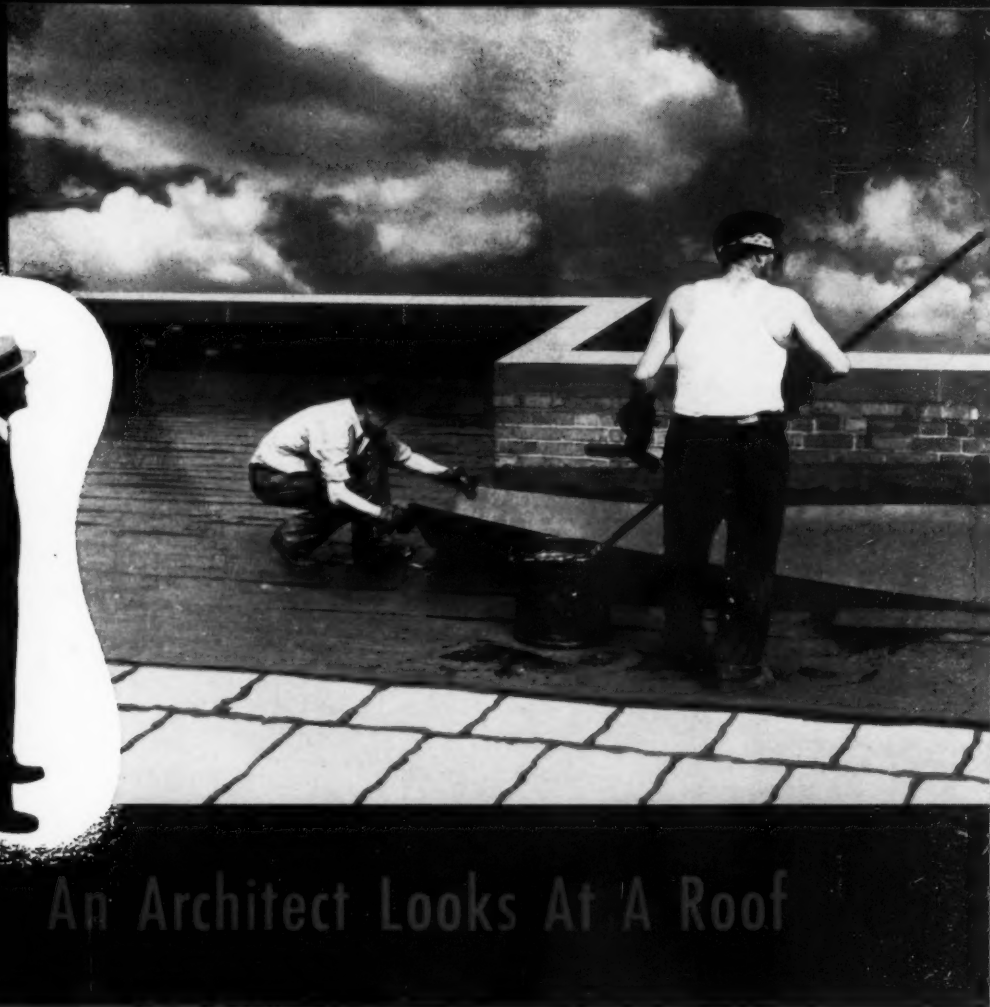


HOW TO GET
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ACTION FROM PAINT



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PENETRATION IN PRESSURE-
TREATED TIMBER

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An Architect Looks At A Roof

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TRENDS IN BRIEF

(Continued from page 20)

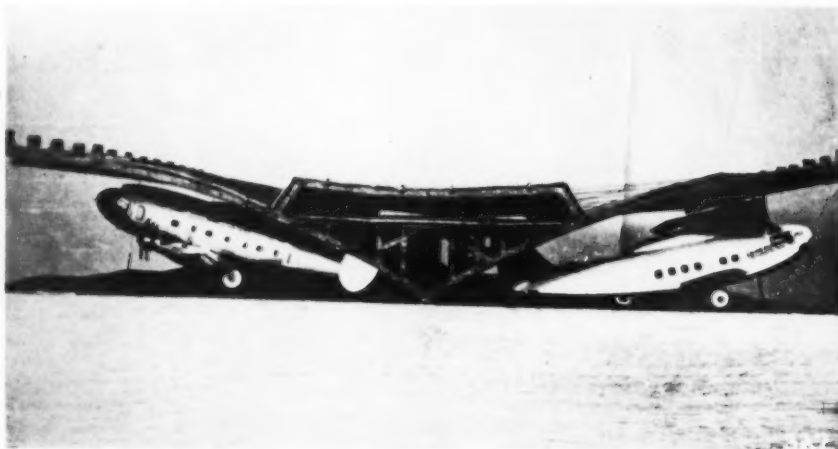


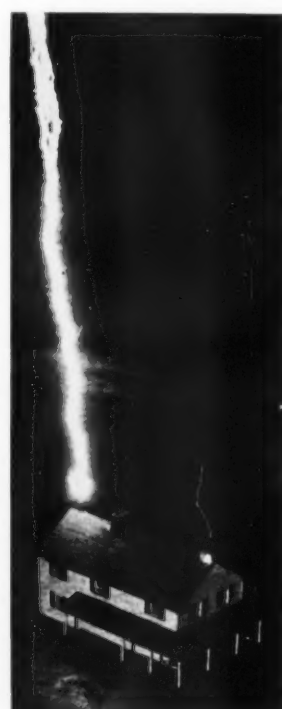
Photo from Dr. Jar Politeka, Univ. of Calif

DESIGNED TO HOUSE NEW TYPE BOMBERS with wing spans of 500 ft. or more is the Suspenarch, unlimited span airplane hangar which requires no supporting columns. The construction relies upon the inward pull of the suspension roof and the outward thrust of the arch to neutralize each other. Conceived by Paul Chelazzi, architect-engineer, the Suspenarch has been granted a U. S. Government patent. In collaboration with other experts Mr. Chelazzi is drafting plans for its large-scale use on defense projects. Derived from the Suspenarch, according to Major C. J. Doughty, engineer, is a five-sided "tent" hangar which requires no scaffolding to build, is prefabricated, can be put up speedily and transported by truck from one site to another and out of reach of bombing



THREE MILLION VOLTS of tailor-made lightning streak safely to the ground in the high voltage laboratory of the Westinghouse Electric & Manufacturing Company at Trafford, Pa., without damage to the steel-bodied car in which Dr. Gilbert D. McCann, research engineer, is seated, or to the tiny wooden house protected by a miniature lightning rod system. Conclusions reached by high voltage engineers as a result of these and other tests are: 1. Positive protection against lightning can be given any building in any location. 2. A steel frame building is immune to lightning damage provided the steelwork is carried to the top of the structure. But if there is masonry above the steel, the bolt will damage it. 3. For

small non-metallic buildings a properly designed and installed lightning rod system is the only means of protection. Lightning rods do not decrease the chances of a building's being struck but prevent damage when a stroke hits



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REVIEWS OF CURRENT LITERATURE

ARCHITECTURAL GRAPHIC STANDARDS. By C. G. Ramsey, AIA, and H. R. Sleeper, AIA. New York, John Wiley, 1941. 344 pp., 9¼ by 11½ in., illus. \$6.00

IN LESS than ten years from the publication of the first edition "Ramsey and Sleeper" appears now in a third, half as large again as the original work. With some six dozen new sheets and with changes and corrections in all but a few sheets of the second edition of 1936, the work is now incredibly up to date in most respects, including data on brick cavity walls, adobe walls, New York Building Code walls, newer type terracotta, glass block, structural glass, termite control, fluorescent light and a score of other recent developments.

So we have here dimensions including those of an adult ailanthus, a bath towel and a great variety of sport areas. But probably architects will want to design for some little time yet garages for Cadillacs a foot longer than the models cited here and all but a foot longer than the longest car cited. And very certainly before the fourth edition appears many a designer will want dimensions for land and seaplanes, large and small, for airports and skyports, for hangars, and for the form and color and size of the insignia which alone, in the smaller ports, municipal, commercial and private, distinguish for a flier a hangar from a barn, a landing field from a meadow, and a skyport from any little jetty.

THE SOUTH IN ARCHITECTURE. By Lewis Mumford. New York, Harcourt, Brace, 1941. 147 pp., 5¼ by 7¼, \$2.00

THE BOOK consists of the four lectures forming last Spring's Dancy Lectures at Alabama College. Vivid talks they are, combining insight and sympathy, and no less because, with one exception, they deal in no way with the South in architecture.

The introductory paper, "The Basis of American Form," is a good introduction to the philosophy of American architecture, and the concluding one, "The Social Task of Architecture," a good introduction to today's wider architecture: building

in new ways with new processes and materials for needs to include community planning and public housing. The universalism of Virginia-born Thomas Jefferson did truly have a Southern setting; but the informing essay on H. H. Richardson makes no attempt to connect H.H.R. with the South, beyond mentioning his birth there and briefly expressing an opinion that "some measure of his success in New England surely derived . . . from his Southern heritage."

Though we cannot agree that "the central subject of these lectures is the contribution of the South to American culture," all must agree in rejoicing in Mr. Mumford's contribution to Southern culture, and hope that some reader may be inspired to investigate and record for us a neglected Southern contribution he mentions in passing: that "vernacular brick tradition" of the latter part of the last century, examples of which are to be found all over the South.

CORINTH: Results of Excavations Conducted by the American School of Classical Studies at Athens. Vol. I, Part II. By Richard Stillwell, Robert L. Scranton and Sarah Elizabeth Freeman. . . . Cambridge, Mass., Harvard University Press, 1941 (for the American School . . .) Text, 243 pp., 9 by 12 in., 189 illus. in text, 20 plates, 14½ by 21 in. in portfolio, \$10.00

THE GREATER PART of Part I of this volume, published in 1932, was written by Richard Stillwell, now associate professor of art and archaeology at Princeton, and at that time director-elect of the School. Professor Stillwell also writes the major portion of the present section, covering the Peribolus of Apollo, the Facade of the Colossal Figures and the Northern Stoa and Shops, while Robert Lorentz Scranton, of Vassar College, author of the just published "Greek Walls," contributes a chapter on Temple C and the Sanctuary of Hera Akraia, and Sarah Elizabeth Freeman one on Temple E.

"It is safe to say that the Agora will not be as long in publication as it was in building, but the complexity of the site is no small obstacle to a rapid attainment of conclusions."

Meanwhile many of us with little or no archaeological background may enjoy the parts of the puzzle already solved in spite of devastation by earthquake and destruction—Byzantine, Frankish and Turkish; and the aim of this notice is merely to record the publication of this tale of grave adventure in a field out of reach of most of us except through the medium of a work of this kind.

AIR RAID DEFENSE (Civilian). By Curt Wachtel. Brooklyn, N. Y., Chemical Publishing Co., 1941. 240 pp., 5½ by 7¾ in., illus. \$3.50

A LITTLE BOOK of wide scope in which the former director of the Institute of Industrial and Professional Diseases in Berlin describes, or rather mentions, defense measures, all of which are practiced "somewhere in Europe." The author himself recognizes the paucity of technical details, and readers will regret the meagerness of the references. But architects will welcome the slender chapter on Shelters which cites standard requirements and recommendations of certain governments.

THE COAST OF MAINE. 101 pp., 6 by 8 in., \$2.00. **MARTHA'S VINEYARD.** 73 pp., 6 by 7½ in., \$1.25. By Samuel Chamberlain. New York, Hastings House, 1941

TWO MORE in Mr. Chamberlain's photographic series, including Sunday and everyday architecture and just enough scenery and legend to explain both. Though winter, danger, endurance have contributed much to the human value of these regions it is fortunate that the camera selects the blazing sunlit days which best furnish a souvenir for native and outlander alike.

FARM BUILDINGS. By D. G. Carter and W. A. Foster. New York, John Wiley, 1941. 404 pp., 5¼ by 8 in., illus. \$3.75

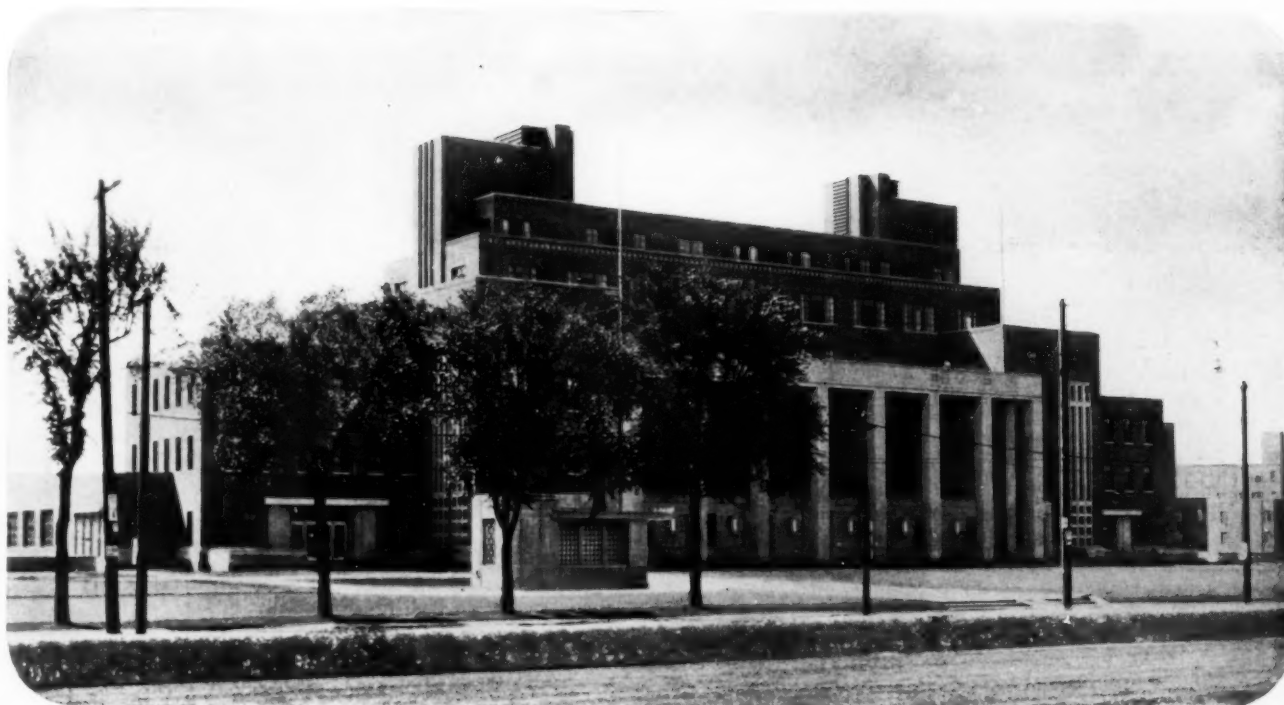
A COMPLETELY REWRITTEN edition of the standard work by the University of Arkansas Professor of Agricultural Engineering and the late Associate Professor of Rural Architecture at the University of Illinois.

(Continued on page 28)

★ Resistance to Abuse

EXPLAINS WHY ARCHITECTS PREFER

"Door Closers by **RIXSON**"

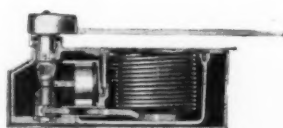


COFFMAN MEMORIAL, UNIVERSITY OF MINNESOTA. Architect: C. H. JOHNSTON, St. Paul, Minn.

● The large quantity of **RIXSON Door Closers** used in the imposing, modern structure shown here bears further witness to the high regard in which **RIXSON** performance is held. **RIXSON** items used include Uni-Checks, No. 25 Floor Checks, No. 350 Checking Pivot Hinges and Thresholds.

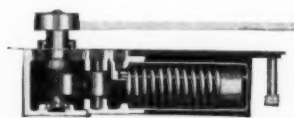
Equipped with Door Closers built to highest standards of efficiency and durability, it can be assumed that this building will be singularly free of door mechanism maintenance for many years of use—and abuse. This is an assumption on which architects have for over 40 years successfully based door closer specifications for all types of structures.

*Catalogue No. 5 giving complete detail drawings and specifications will be mailed on request. If you wish, a **RIXSON** representative will go over the full range of **RIXSON** products for the benefit of future specifications.*



**RIXSON No. 20 and 25
Floor Checks**

with **RIXSON** extruded thresholds used on entrance doors.



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San Francisco: 116 New Montgomery Street - Seattle: 4012 E. 38th Street - Los Angeles: 909 Santa Fe Avenue - London, Ont., Can.: Richards-Wilcox Co., Ltd.

REVIEWS OF CURRENT LITERATURE

(Continued from page 26)

Designed mainly for students in agricultural colleges, the compact information on best practice will also delight and instruct farmer, suburbanite, the general reader, and not least the architect commissioned to design buildings for an estate. The essence of a hundred authorities is

here with meticulous acknowledgment to each from the slenderest Farmers' Bulletin to AIA and ASVHE recommendations.

TRANE AIR CONDITIONING MANUAL. La Crosse, Wis., Trane, 1941. 376 pp., 8 1/2 by 11 1/4 in., illus. \$5.00
REVISED EDITION of a practical work for students and technicians by mem-

bers of the Trane Company's engineering and laboratory staff.

Interspersed in the lucid text are innumerable diagrams and graphs, there are nearly a hundred reference tables, test problems conclude each chapter and there is a full, well arranged index.

THE OLD HOUSE PICTURE BOOK. By Marion Nicholls Rawson. New York, E. P. Dutton, 1941. 96 pp., 9 by 11 in., illus. \$2.50

AT FIRST SIGHT apparently a leisure-hour book, even almost a young people's book, this work with its several hundred well executed drawings and its wealth of documentation has much of value also as a source book for early architectural usage from the New England to the Southern Colonial States.

THE TRIBOROUGH BRIDGE AUTHORITY: Fifth Anniversary. New York, The T.B.A., July 11, 1941, 53 pp., 9 by 12 in., illus. To MARK the fifth anniversary of the opening of New York's Triborough Bridge, the Triborough Bridge Authority has issued a vivid 50-page story of that project and of the subsequent profitable Blitzdevelopment of metropolitan arteries by a publicly owned business corporation.

MOBILE HOMES: A Study of Trailer Life. By Donald Olen Cowgill. Washington, D. C., American Council of Public Affairs. 127 pp., 6 by 9 in., \$2.00

THIS STUDY, by an associate professor of Sociology at Drury College, of the ages, incomes, occupations, tastes and social problems of trailer families is a contribution to low-cost housing literature, particularly that of the one-room dwelling, from which many trailerites are recruited.

CURRENT PERIODICAL LITERATURE

THE DESIGN OF MODERN DANCE ROOMS. A Criticism by Leo Reisman. Architect and Engineer, San Francisco, July 1941, pp. 27-28

IN A PAPER read before the Northern California Chapter of the AIA "the internationally famous band leader" states that from the rooms he has "played in and seen" he judges "architects . . . have no conception of the function of the dance room."

(Continued on page 30)



PORTALS TO PROFICIENCY

"Proficiency—advancement or progress in knowledge or skill."—Webster

Back of these doors, in 20 million cubic feet of air conditioned space, the Ford Motor Company will soon be turning out engines for the Army's most powerful planes at the rate of one an hour.

Here, the largest air conditioning system operating in an American industrial plant, not only makes blackout construction possible, but speeds production.

Temperature control safeguards the uniformity of metal stock, the accuracy of gages and machine tools . . . essential to maintain precision to 1/10,000 of an inch in most of the parts of these 2000 h.p. Pratt & Whitney, 18 cylinder double-row engines.

Humidity control, together with elimination of dust and oil fumes eliminate the sabotage of corrosion in raw stock, parts in process or assembly.

And, as elsewhere, efficient air conditioning means less sweat, clearer eyes and steadier hands for every worker.

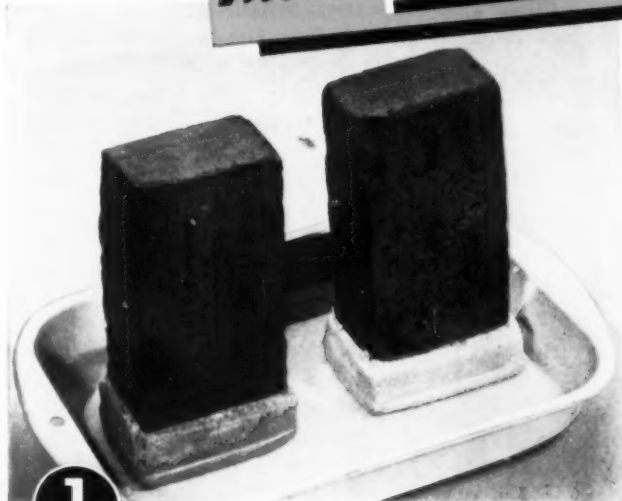
Whenever the clock strikes, think of one more of these precision-built engines for defense . . . and think of York air conditioning too. York Ice Machinery Corporation, York, Penna.



YORK REFRIGERATION AND AIR CONDITIONING

"Headquarters for Mechanical Cooling Since 1885"

MAKE THIS TEST - *Prove* **BRIXMENT** is BEST!



1

"Cap" one brick with Brixment mortar (left), and one brick with mortar made with 50-50 cement and lime. After mortars have hardened, place both brick in a pan of shallow water. (Photo 1.)



2

Keep about an inch of water in the pan. Even if soluble salts are present in the brick or sand, you will soon be convinced that *Brixment* mortar helps prevent efflorescence. (Photo 2.)

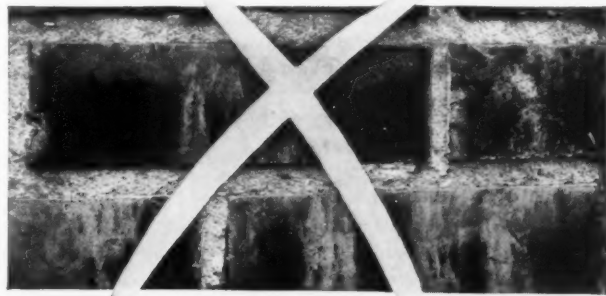
BRIXMENT *Helps* **Prevent EFFLORESCENCE!**

EFFLORESCENCE is an outcropping of minute white crystals on brickwork. When these crystals occur on colored mortar joints, the condition is sometimes mistaken for *fading*.

Efflorescence is caused by the presence of soluble salts in masonry materials. When reached by water, these salts dissolve, and are drawn by evaporation to the surface of the wall.

Brixment itself *does not cause efflorescence* because it is practically free from soluble salts. Even when such salts are present in the sand or brick, the waterproofing in Brixment mortar usually *prevents*

them from coming to the surface. . . . Bricklayers who have used Brixment mortar for years say they have far less efflorescence with Brixment mortar than with *any other kind*.



BRIXMENT

For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

REVIEWS OF CURRENT LITERATURE

(Continued from page 28)

which is to "create a mating meeting place . . . to create all possible stimulation to romance" and above all else "the quality of intimacy," through proper use of color, light, acoustical

material and form. White is in harmony with every woman's dress, reflects light and requires the smallest amount of power. "Light should be where you need it . . . but architects persist in lighting up ceilings and

side walls above eye level causing neck strain . . ."

AN EMERGENCY CENTER AT GUILFORD . . . Builder, London, May 23, 1941, pp. 499-501, illus.

THIS ARTICLE describes a center for evacuated children whose mothers must work, designed by Miss T. G. Ledebauer, ARIBA, for the Nursery Schools Association and erected with some assistance from the American War Relief Society. It is an adaptation of the army hut to accommodate 50 children and four teachers, and consists of two playrooms each 20 by 20 ft., with a small room for storing beds, as well as cloakroom and washroom. This particular hut has no kitchen, as it adjoins a school which sends over hot meals. The construction is 3½-in. Gyproc on reinforced concrete, with light steel roof trusses, the exterior covered with one-ply roofing felt, the joints caulked with mastic. Three days suffice for erection, and less than two weeks thereafter for interior finishing, plumbing, etc. The cost of such a center is estimated at under £700, say \$2,500.

A MODEL FOR CITY PLANNING. By Willard A. Ridings. Engineering News-Record, New York, July 17, 1941, pp. 71-72, one photo

THIRTY MEN working for three years have almost completed the 24-ft.-square scale model of the metropolitan district of Los Angeles. At the scale of fifty feet to the inch, the model is on a plywood base with buildings of white pine and plaster-putty trees and landscaping. Sections are demountable, and the model has already been used for studying parkway developments, housing projects and the proposed new civic center.

THE BRITISH WAR DAMAGE ACT OF 1941 . . . Journal of the RIBA, London, June, 1941, p. 146

THE BRITISH War Damage Act, 1941, according to a ruling of the Board of Trade, regards architectural plans and drawings as "documents owned for the purpose of a business" and therefore not insurable. RIBA members are recommended therefore to inquire whether the client wishes the drawings to be delivered to him or whether they are to remain with the architect at the client's risk.



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gone into the development of SISALKRAFT. It's "engineered" to do its job well — recognized as the BEST to be had.

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CURRENT TRENDS OF BUILDING COSTS

Compiled by Clyde Shute, Manager, Statistical and Research Division, F. W. Dodge Corporation, from data collected by E. H. Boeckh & Associates, Inc.

CURVES INDICATE trend of the combined material and labor costs in the field of residential frame construction. The base line, 100, represents the U. S. average for 1926-1929 for residential frame construction.

Tabular information gives cost index numbers for the nine common classes of construction. The base, 100, in each of the nine classes represents the U. S. average for 1926-1929 for each particular group. The tables show the index numbers for the

month for both this year and last.

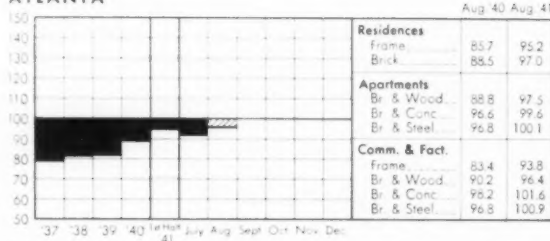
Cost comparisons, as percentage differences for any particular class of construction, are possible between localities or periods within the same city by a simple process of dividing the difference between the two index numbers by one of them. For example: if index for city A is 110 and index for city B is 95 (both indexes for A and B must be for the same class of construction), then costs in A are approximately 16% higher

than in B $\left(\frac{110-95}{95} = 0.158 \right)$. Conversely it may be said that costs in B are approximately 14% lower than in A $\left(\frac{100-95}{110} = 0.136 \right)$.

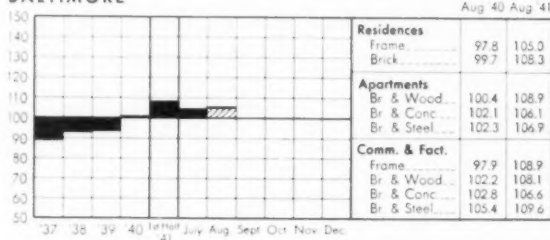
Similar cost comparisons, however, cannot be made between different classes of construction since the index numbers for each class of construction relate to a different U. S. average for 1926-1929.

CONSTRUCTION COST INDEX United States average including materials and labor, for 1926-1929 equals 100

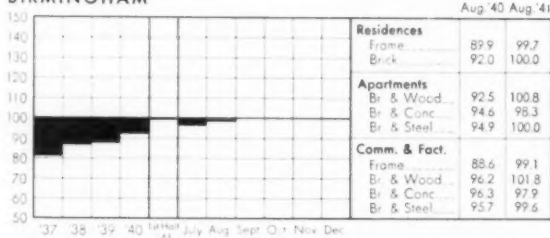
ATLANTA



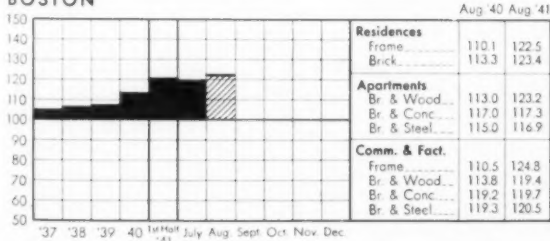
BALTIMORE



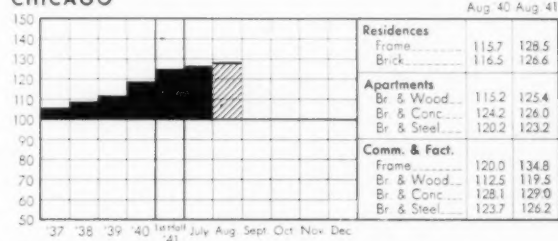
BIRMINGHAM



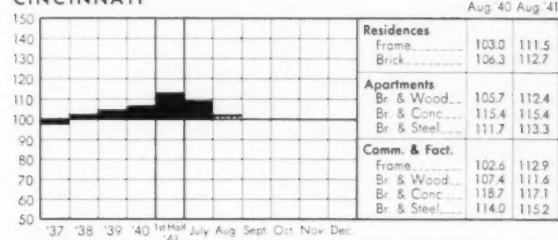
BOSTON



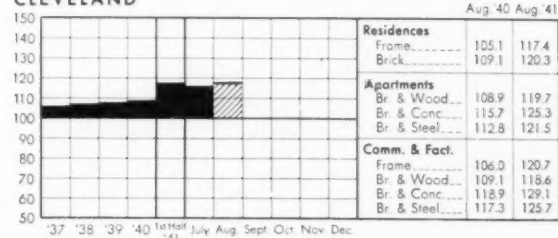
CHICAGO



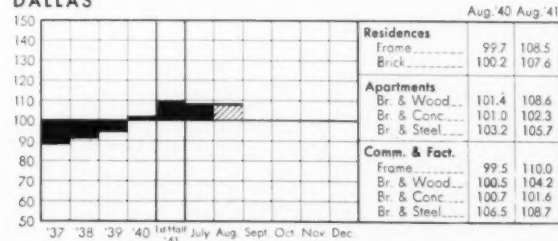
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CLEVELAND



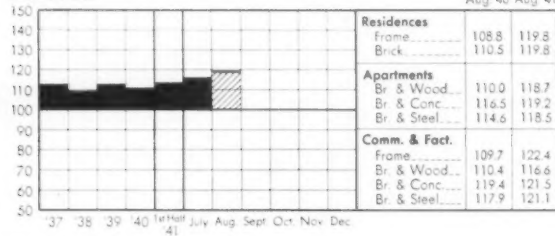
DALLAS



CURRENT TRENDS OF BUILDING COSTS

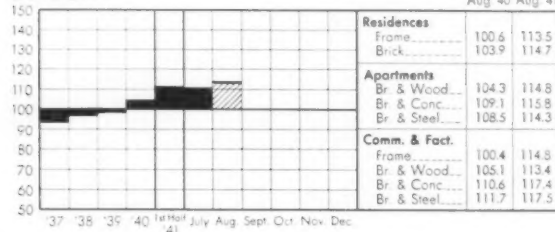
DENVER

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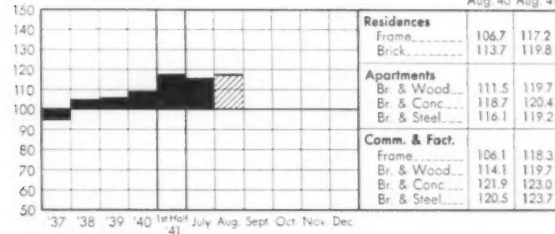
DETROIT

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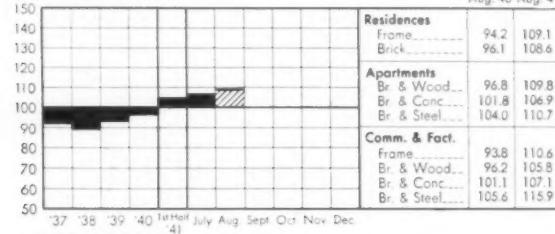
KANSAS CITY

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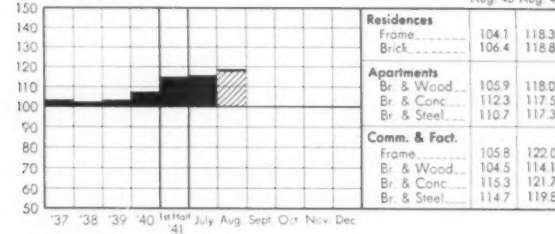
LOS ANGELES

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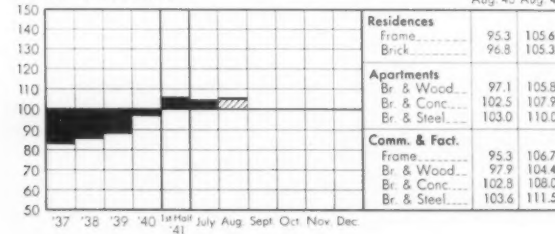
MINNEAPOLIS

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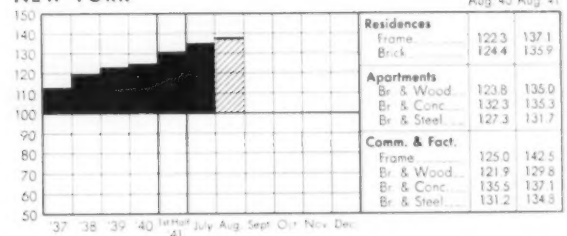
NEW ORLEANS

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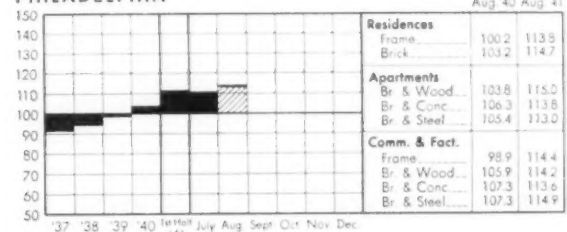
NEW YORK

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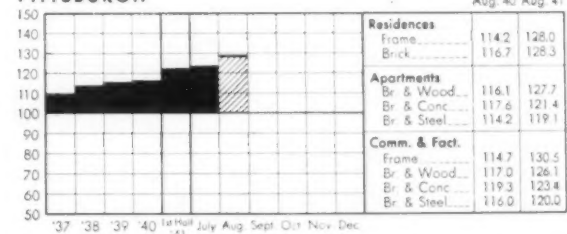
PHILADELPHIA

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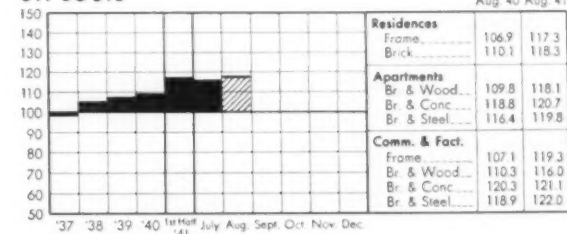
PITTSBURGH

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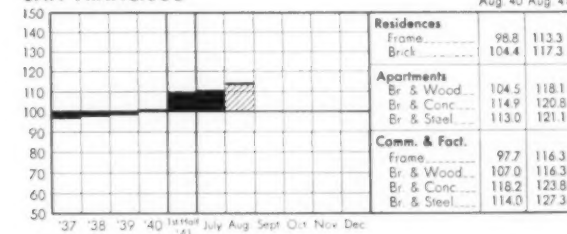
ST. LOUIS

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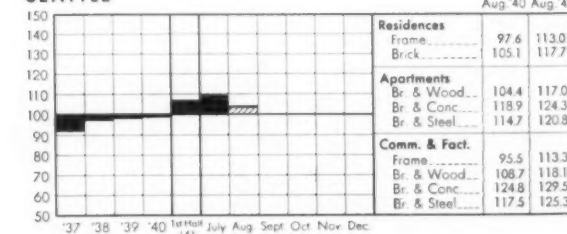
SAN FRANCISCO

Aug '40 Aug '41



SEATTLE

Aug '40 Aug '41



WHAT LIES AHEAD FOR BUILDING COSTS

While statistics do not show excessive increase in building costs, construction cannot expect to escape the general excitement about price increases and inflation. It is already coming in for its share of attention in the Administration's program to control prices and rents. With all price levels generally expected to increase, building costs will bear watching in the future, but there appears to be no immediate cause for alarm.

By EMERSON GOBLE, Associate Editor of ARCHITECTURAL RECORD

THROUGH the first two years of the war period, increases in building costs have been fairly steady, but conservative. Indeed national cost indexes show building in a favorable light in comparison with prices of many commodities. Labor costs show more of a rise than wholesale building material prices, but to date all cost advances have given no great cause for concern.

Nor does there appear any tangible reason for panic in the immediate future. Nevertheless inflationary tendencies are at work in virtually every field of business, the Administration is setting up machinery for the control of prices and rents, and building costs will not be exempt from the general excitement. On every hand business men and housewives are asking such questions as: How much will prices go up? Are we to have inflation? Or will government controls be effective? How will the proposed rent control affect new building?

Priorities are Washington's bottleneck

Much information is currently available in Washington, and much of it bears careful observation and analysis. But even in Washington,

where all present price dislocations originate, it is clearly impossible to find final answers, and confusion is just as great as elsewhere. The Price Control Bill, giving the authority to control prices (also rents in defense areas) that was requested by the President, is now before Congress. But in his testimony before the House committee on the bill, Leon Henderson, Chief of OPACS (Office of Price Administration and Civilian Supply), said that, even with the controls asked, prices would rise and the government would have an enormous task to prevent inflation. So this analysis of the price situation with respect to building costs must necessarily be as of the not-too-distant future.

The confusion about prices goes back directly to the confusion about certain critical materials. And that means priorities. The whole business is currently a major bottleneck, one of the bottlenecks that is starting agitation for the settlement of some serious jurisdiction disputes among Washington agencies.

With respect to building, for example, the bottleneck works this way to becloud the future: While building construction has been merrily setting

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new records for volume, there is considerable concern for the future due to much-talked-of impending shortages of materials and equipment (AR 8/41, p. 37). Two things that could clear up the situation have long been expected daily, and still are—announcement of the organization that is to administer priorities matters with respect to defense construction, and the critical list of materials and equipment for defense housing. Both are under discussion between the agencies concerned, but as this is written both are still jammed in the bottleneck. Meanwhile the indecision is tying up activities of other housing agencies. Several of them—FHA, USHA, the Department of Commerce, the Division of Housing Co-ordination, and others—are devoting intensive study to substitute materials and various conservation schemes, all of which more or less depend on what happens in priorities. Until something can be known as to what materials will be available, and some estimates can be made as to quantities, the future of defense housing and other building remains obscure.

The basic price situation

It has long been generally anticipated that the burgeoning defense activity would start a spiral of price increases. It has been generally agreed that serious price inflation, with its inevitable later collapse, would have disastrous consequences. It would be difficult to find any business that suffers more than building from such cyclical disturbances. So there is no real opposition to the objectives of price control.

For some years economists have been pointing out that deficit financing of large federal projects carries the threat of inflation. And now come the factors that are making the threat an actuality—the huge armament spending and the developing scarcity of commodities. While purchasing power is increasing rapidly through increased wages, the things money can buy are becoming scarcer through the diversion of materials and manufacturing capacity to the production of armaments. Thus the demand for buildings is very active right now. Increased purchasing power coupled with scarcity is certain to bring price increases.

Four steps are being suggested by which the surplus buying power could be kept in check: 1. Reduction

of the purchasing power by taxation; 2. Reduction of people's savings through voluntary or compulsory loans to the government; 3. Increase of production of goods for civilian use, to alleviate the scarcity of things available for purchase; 4. Reduction of government expenditures for projects not essential to defense, to cut purchasing power; 5. Curtailment of credit for installment buying, particularly for durable goods such as refrigerators, automobiles and other large items requiring materials made scarce by the armament program. These are, of course, in addition to the direct control of prices, but they are considered necessary to the functioning of a price control system. Some of these steps, moreover, would tend to help the defense program itself. At the same time they could be expected to cushion the let-down after the emergency. In this respect much is expected of building; indeed, it is pointed out that "rebuilding America," particularly its large cities, should be an important "new frontier" after the war.

All in all, price control is widely held to be a necessary device through the strains of the times, but the impossibility of maintaining rigid control raises the question of its power to check inflationary tendencies without additional controls.

Present efforts to control prices

The present bill, now before Congress, asks that authority be given to the President, to be delegated as he sees fit, to establish ceilings on prices of commodities and rents. As to rents, particularly important to building, the bill does put some restrictions and limitations on the control and its operation, but as to commodities in general it simply calls for broad powers of control. It merely directs the President to give due consideration to prices of the commodity prevailing on July 29, 1941, and to make adjustments for such factors as speculative fluctuations, changes in costs of production or transportation, and the profit situation of the sellers.

A conspicuous qualification in the bill, one that has been the subject of much comment, is that it shall not apply to wage rates. While the President, in his message transmitting the bill to Congress, and Leon Henderson, in his testimony, both recognized the danger of rapid increases in wages, the price control bill gives

no authority to regulate them. Thus it is made clear that, for the present at least, the effort to control prices will leave at least this one major factor unaccounted for.

Rent control and building

The bill leaves the necessity for rent control up to the President, then directs him to "issue declarations designating defense rental areas and defense area housing accommodations, and setting forth the necessity for, and recommendations with reference to, the stabilization or reduction of rents for defense area housing accommodations within each area so designated." If after 60 days the rents have not been stabilized or reduced by state or local regulations, the President may establish ceilings for them. The President is directed also to give consideration to recommendations made by state or local officials concerned with housing in the designated defense area.

Defense area housing accommodations are defined as housing units in defense rental areas which were, subsequent to August 31, 1940, rented or offered at a rate of \$15 per room per month, or less, and for which the rent had risen 10 per cent or more.

Rent control, always a bugaboo of the building industries and the real estate fraternity, appears quite definitely in the offing. High rents have always been the greatest incentive to new building, and rent control has heretofore been regarded as a certain deterrent. So the prospective rent control becomes important to the future volume of residential construction.

Conversations with Washington housing officials make it clear that there is every intention to combat any rental increases that might hamper the defense program, as high rentals and lack of housing accommodations did in the last war. At the same time there seems to be general recognition of the fact that the surest cure for high rentals is new construction. Whether rent controls can be effectuated without putting a damper on new building will depend largely on their administration.

Already considerable study has been given to the problem in Washington. It is said that rent control can be so managed as to leave plenty of opportunity for new construction, even to encourage it. The Canadian

(Continued on page 102)



COFFMAN MEMORIAL UNION

All photos of Coffman Memorial Union by Hedrich-Blessing Studio

OFFICE OF C. H. JOHNSTON, Architects-Engineers

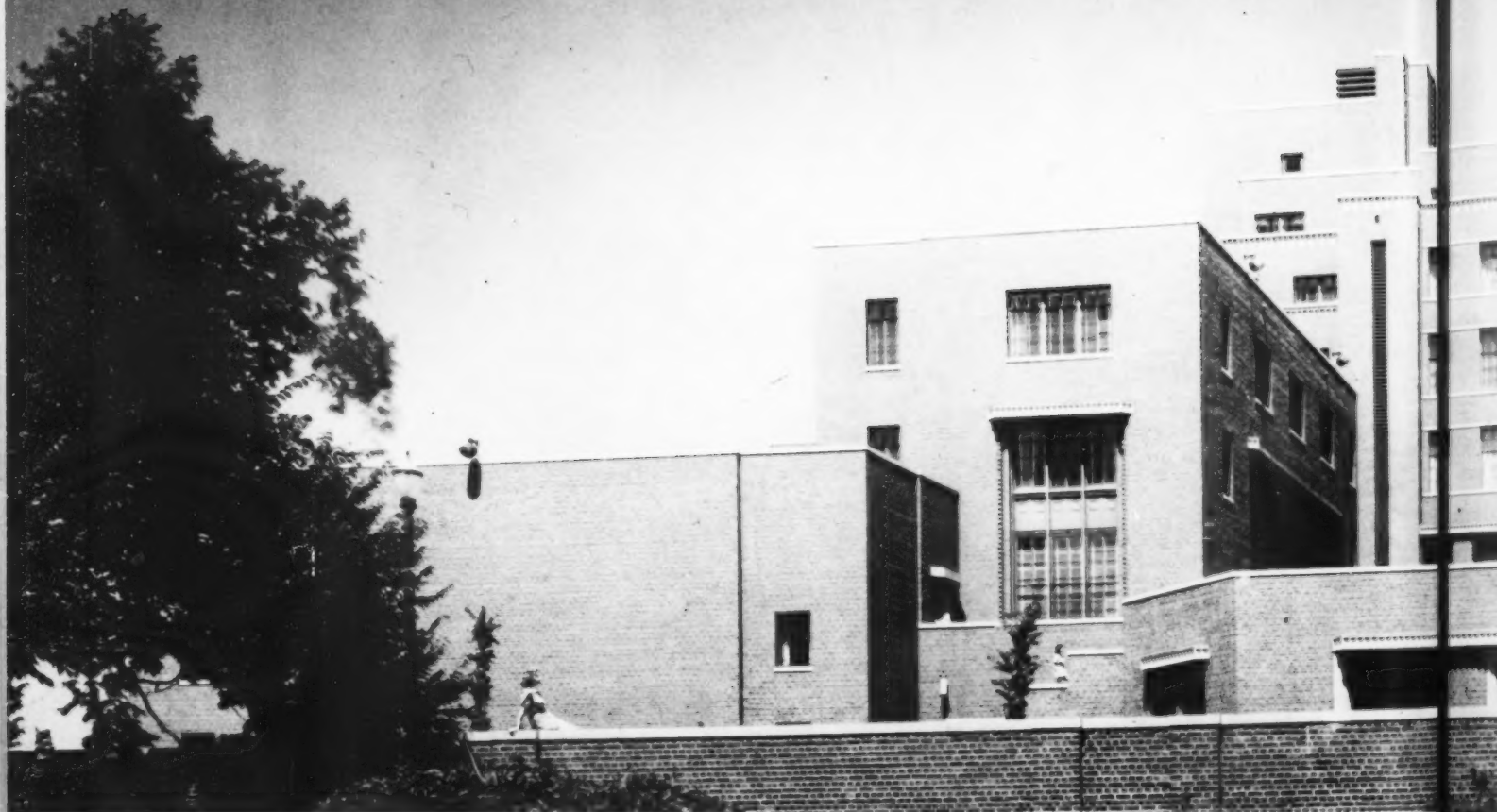
C. H. JOHNSTON, JR., AIA • EDWARD S. NELSON, ASCE • STIRLING HORNER, AIA
PROF. ROY JONES of the University Department of Architecture, CONSULTANT

IN THE COFFMAN MEMORIAL UNION, architects will find not only an outstanding solution to the complex problem of providing for the requirements of a vast student union but a series of excellent solutions to numerous individual problems whose application extends well beyond the campus. For under this single roof are large public lounges, smaller lounges to serve various specialized needs, restaurants ranging from a cafeteria to a terrace café, a huge ballroom, club rooms, bowling alleys, an underground garage and other elements too numerous to list. Specifically the Union is the realization of the idea expressed by the late president of the University, Lotus D. Coffman, when he commented that "It is true that if one stripped the University to its barest essentials, its intellectual life would remain. Nevertheless, students are not in the classrooms and laboratories all of the time. It is for this reason that the University is interested in maintaining a proper social environment and also in making its buildings and campus as attractive as possible." In the splendid Coffman Memorial, the University now has both the modern facilities to serve this social need and a place where the entire University body—students, faculty members and alumni—meet informally.

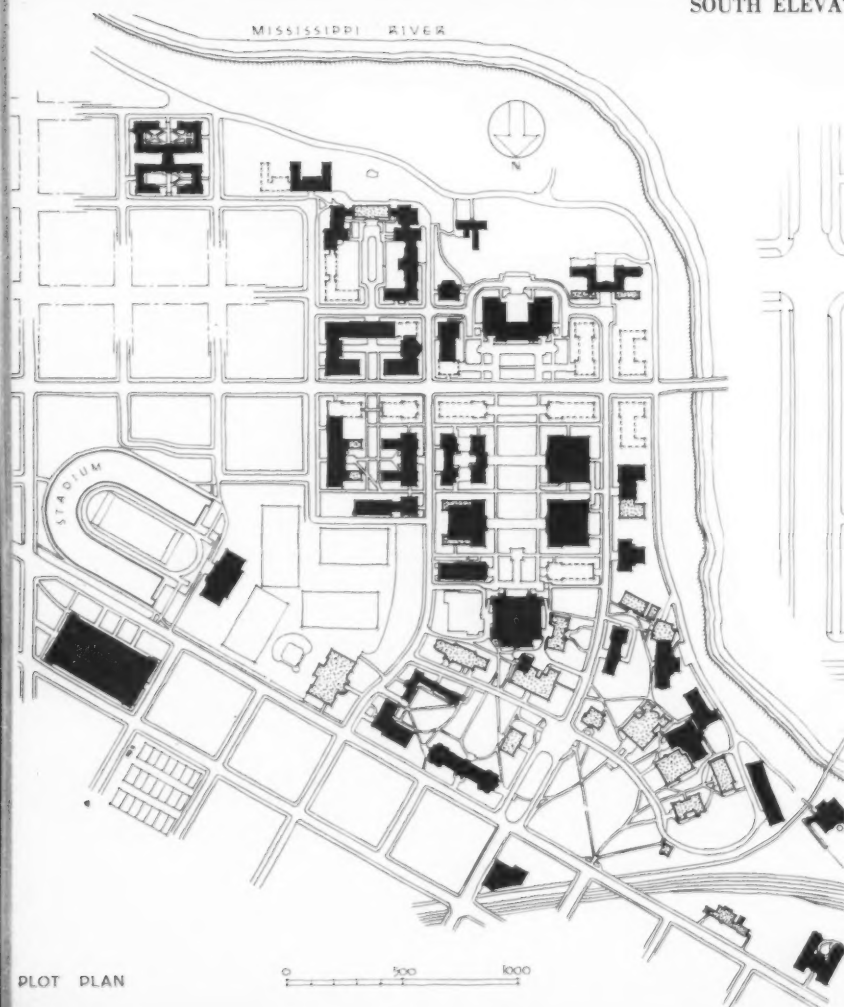
MECHANICAL EQUIPMENT BY PILLSBURY
ENGINEERING COMPANY:

INTERIOR DECORATION, FURNISHINGS
AND FURNITURE BY JOHNS H. HOPKINS

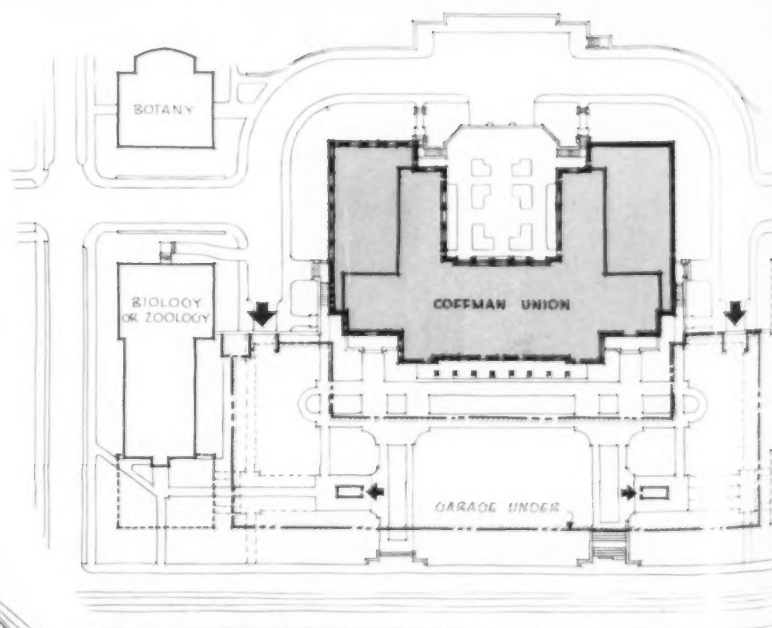
COFFMAN MEMORIAL UNION: OFFICE OF C. H. JOHNSTON,
Architects-Engineers; PROF. ROY JONES, Consultant (continued)

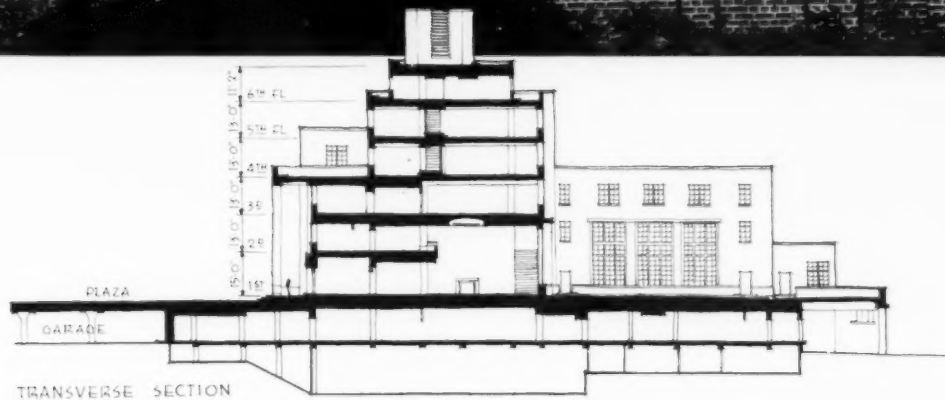


SOUTH ELEVATION



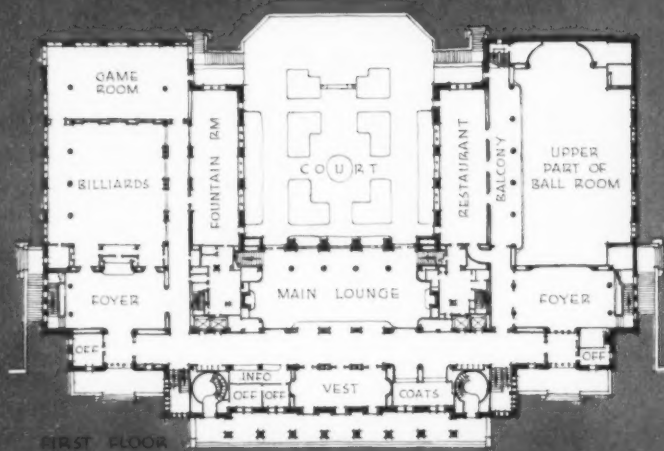
PLOT PLAN



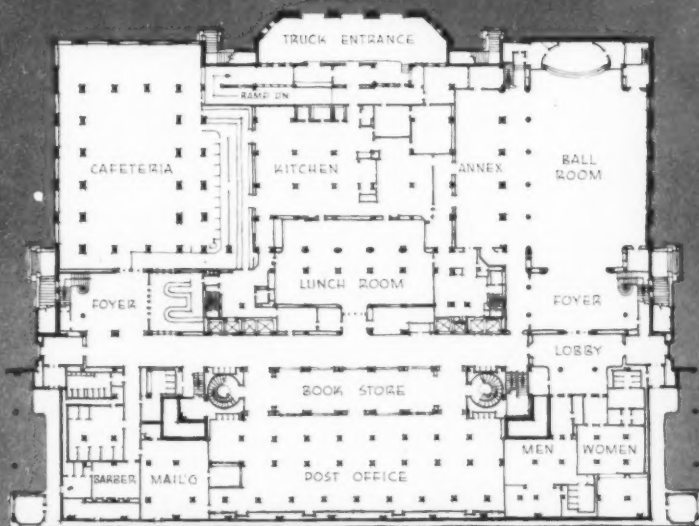


GENERAL

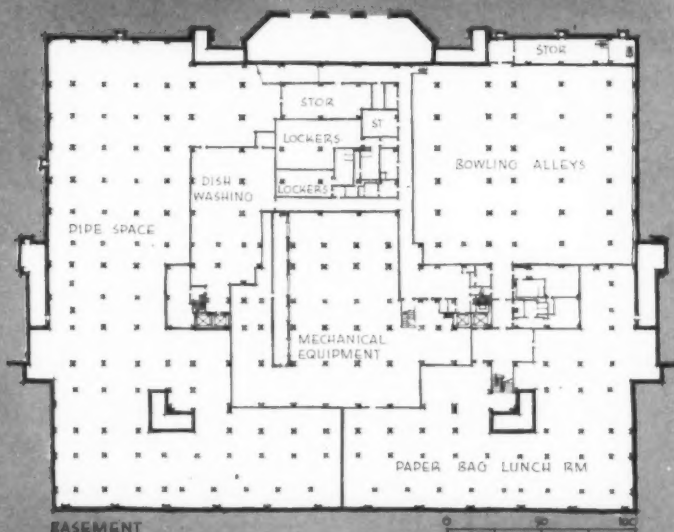
IN ROUND NUMBERS the Coffman Union was built at a cost of \$2,000,000, including all furnishings, furniture, equipment, etc. A PWA grant accounted for 45 per cent of this amount; the balance was raised by various campus organizations, gift campaigns and a loan of \$400,000 which will be paid off from operational proceeds. Exclusive of the garage the building contains 3,200,000 cu. ft. The cu. ft. cost excluding garage and furnishings was 42c. The plan of the main campus in Minneapolis shows the dominant position of the Union at one end of the major axis. It is noteworthy that all of the buildings indicated in gray have been designed by the Office of C. H. Johnston, architects of the Union. In the plot plan and section, the extent of the underground parking garage is shown. The garage, with space for 250 cars, is entered from the low level at both ends of the building. Pedestrian entrance is provided both by ground-floor corridors and by outside entrance structures located in the plaza at the front of the main building. Organization of the building as indicated on the sectional drawing is detailed in the floor plans shown over-page.



FIRST FLOOR



GROUND FLOOR



BASEMENT



CURVED STAIRS—a secondary staircase leading up from the ground floor

PLAN

THE CENTER OF ALL STUDENT LIFE on the campus, the Union is practically a small city in itself. Within its eight floors are some 280 rooms, including 20 dining rooms, a large cafeteria and restaurant (see pages 52 and 53), lunch grille, soda fountain room, lounges, a U. S. Post Office, the underground garage for 250 cars and a variety of special-use rooms. On the ground floor are the ballroom with its stage (see pages 50 and 51), a cafeteria, a light-lunch grille, and the central kitchen and serving rooms, together with preparation, storage, and refrigeration rooms. The service entrance with a covered truck platform is at the rear.

The post office and university mailing room are accessible from the garage, by outside entrances and from corridors within the building. The bookstore (where no textbooks are sold) adjoins the post office; barber and beauty shops are near by. Also on this floor is the radio control room from which 10 separate programs can be sent out at one time through loudspeakers integrated with the decorative scheme in the lounges, dining rooms and other areas.

At the basement level are 16 bowling alleys, a lunch room for students who bring their own lunches, a central dishwashing room, storage rooms, service quarters and mechanical equipment rooms.

Besides the handsome main lounge (see pages 48 and 49), the first floor contains checking room, director's offices, a small restaurant, billiard, games, and fountain room. In the games room are 30 tables for chess, checkers, etc. The billiard room accom-





the ground floor
STAIR TOWER—one of the main stairs at the front of building

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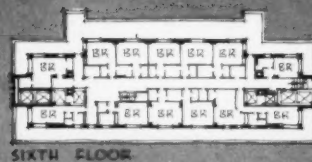
ad 49), the
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modates 15 tables for pool, snooker and billiards.

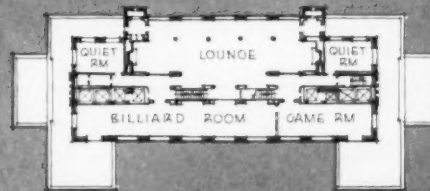
One of the busiest floors in the entire building is the second, which has rooms for the various student organizations and university and fraternal groups that need permanent offices on the campus. A generous corridor, with balcony overlooking the main lounge, connects the many rooms. A special suite is the headquarters for alumni organization offices. In addition, there are two large meeting rooms on this floor, one on each side of the building, which are available for the use of campus groups. The east wing contains a men's lounge; a lounge for women is in the west wing.

On the third floor are also a series of varied-use rooms connected by a long corridor. At the west end is the music and fine arts room which was designed especially for student musical and dramatic performances. Here art exhibits are hung and musical concerts are either performed in person or delivered from the main radio control room. On this floor also are a large private dining room for banquets and small parties, 12 other dining rooms and 10 rooms available for student meetings.

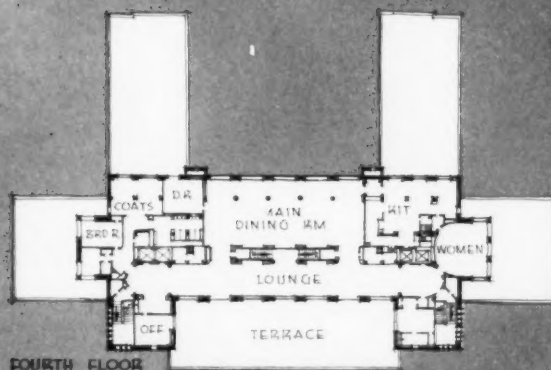
The fourth, fifth and sixth floors are occupied by the Campus Club, an organization of faculty members. Quarters on the fourth floor include a main dining room and kitchen, general offices, and a tiled north terrace commanding a view of the mall. On the fifth floor are the club's main lounge and billiard room and meeting rooms. The sixth floor is entirely devoted to bedrooms for faculty club members.



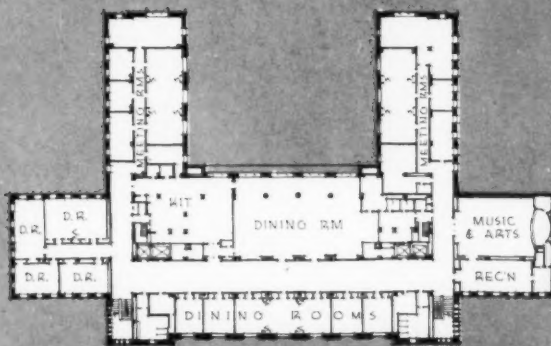
SIXTH FLOOR



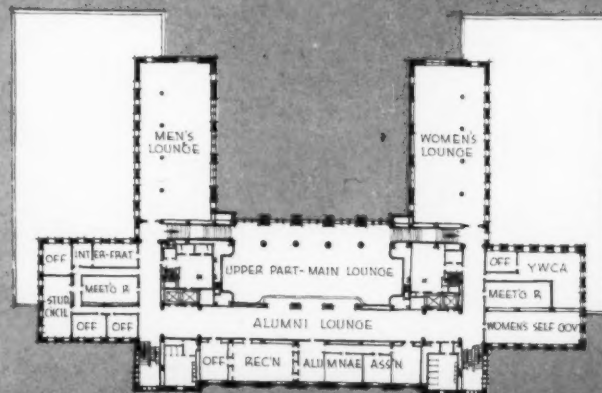
FIFTH FLOOR



FOURTH FLOOR



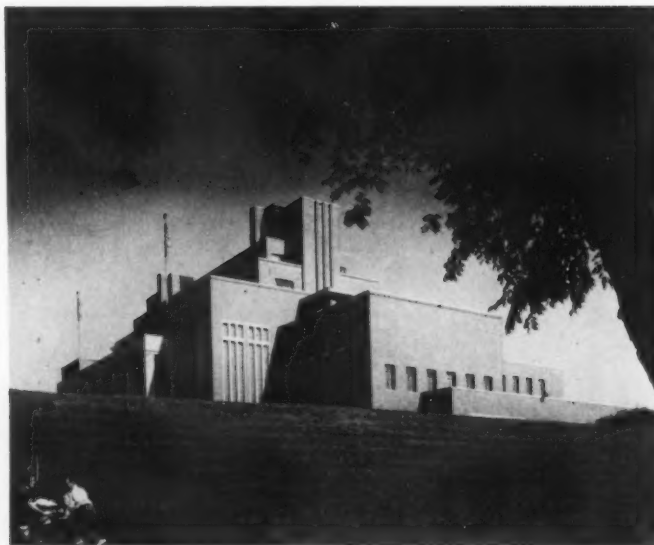
THIRD FLOOR



SECOND FLOOR



ENTRANCE PORTICO



VIEW FROM THE WEST

STRUCTURE

STRUCTURALLY, the building is entirely reinforced concrete—skeleton frame, steel pan slabs and joists, concrete beams, girders, columns and square footings. For the underground garage, which is 125 by 475 ft. in area, the flat slab type of construction was used, with two-way reinforcing, round concrete columns with drop panels and capitals, and square concrete footings. Exterior walls are made up of red-tone wire cut face brick with stone trim, backed up with load-bearing clay tile; platforms and steps are of limestone. Windows are painted steel casements. The roof is covered with built-up roofing; portions of the roofs used as terraces are surfaced with red quarry tile laid over a waterproof membrane. Roof metal, flashings, etc. are of galvanized iron; louvers are of copper.

Interior partitions are of clay tile and cinder concrete tile, with door frames of hollow metal with flush wood doors (except for principal doors where aluminum frames and doors are used). Walls and ceiling surfaces are of painted plaster, with many of the walls of principal rooms surfaced in rich wood veneers. Various floorings used in the building include asphalt mastic tile with a black rubber base, linoleum, marble, tile, terrazzo, and oak tile. Carpets are used in principal areas; cement occurs in subordinate spaces. Kitchens, serving rooms and other related areas have tile floors and structural glazed tile walls. Principal rooms and corridors have perforated acoustical tile ceilings.

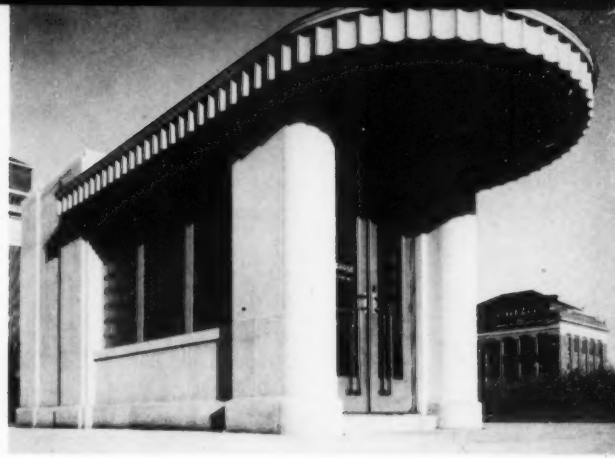
HEATING

THE BUILDING IS HEATED BY STEAM, using cast iron radiators and copper radiation of the wall convector type, and forced air. The steam supply is obtained from the central heating plant of the university. High pressure steam service is used for all kitchen and associated apparatus and for unit heaters in the garage. Exhaust ventilation is provided for kitchens and related areas, toilets, etc. Fresh air supply and exhaust system of ventilation is provided for various portions of the building, with the usual fan pre-heater, reheater, filters and air-washing equipment.

ELECTRICAL EQUIPMENT

ELECTRICAL WORK comprises light and power systems, telephone and public address and radio broadcasting systems, sound and movie projection system, Campus Club annunciator system, intercommunicating telephone system, clock and signal systems, and color lighting dimmer control system for ballroom, restaurant, main dining room and some of the private dining rooms. In addition there is photoelectrical cell operation of garage doors, exterior ground floodlighting and spotlighting in the soffits of entrance doors. The four elevators are electric geared traction type with push-button control, arranged for operation either with or without attendant, with automatic leveling, variable voltage control and power operated doors. Electrically operated dumbwaiters, conveyors and subveyors are provided for all kitchen, serving rooms, dishwashing room and related spaces.

Pedestrians have access to the underground garage through entrance structures in the plaza in front of the main building (right, above); cars enter from a lower level at either end of the building (right)



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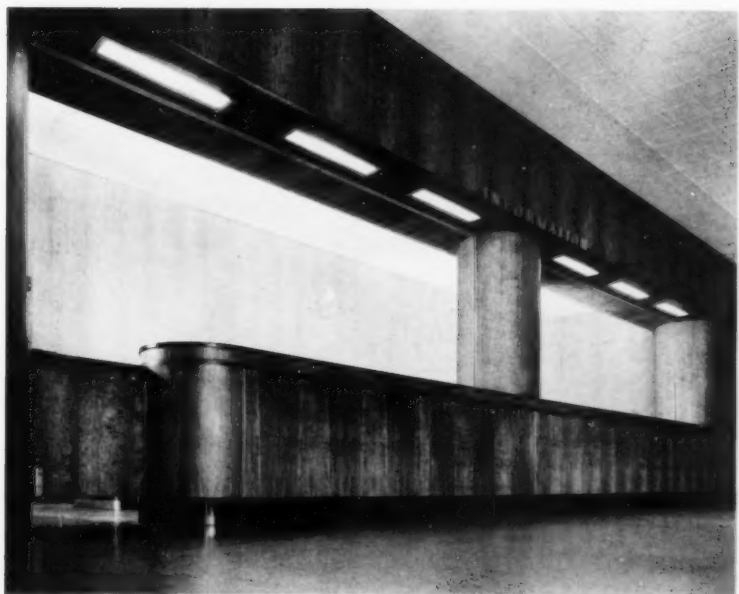
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MAIN LOUNGE

IMMEDIATELY OPPOSITE THE MAIN ENTRANCES is the colorful and richly furnished Main Lounge. The room is two stories in height, with a balcony at one side opening off the second floor corridor. Walls of the lounge, which is 50 by 100 ft. in area, are surfaced in English oak. The tall columns gleam in a sheathing of bronze. Tall doors lead out from the lounge onto the south terrace overlooking the Mississippi River. At the right of the main entrance is a free checking room, and at the left are the director's offices and information desk.



INFORMATION DESK



BALLROOM

THE TWO-STORY BALLROOM is located on the ground floor. A balcony on the first floor level overlooks the area. There is space on the main dance floor for 1,200 couples, and an adjacent foyer may be used for overflow. The ballroom is equipped for sound movies, with a projection booth at the rear and a permanent screen on the stage. When not in use, the screen is covered with a cyclorama drape. On the stage are an electric organ and a grand piano — one of 16 pianos in the building. Dancing comfort is assured by the use of one-inch insulation material which underlays the oak tile floor. On occasion, the ballroom is also used for banquets, at which 1,200 may be comfortably served. Checking facilities and small lounges for men and women adjoin the room.

COFFMAN MEMORIAL UNION: OFFICE OF C. H. JOHNSTON,
Architects-Engineers; PROF. ROY JONES, Consultant (continued)



BALLROOM FOYER





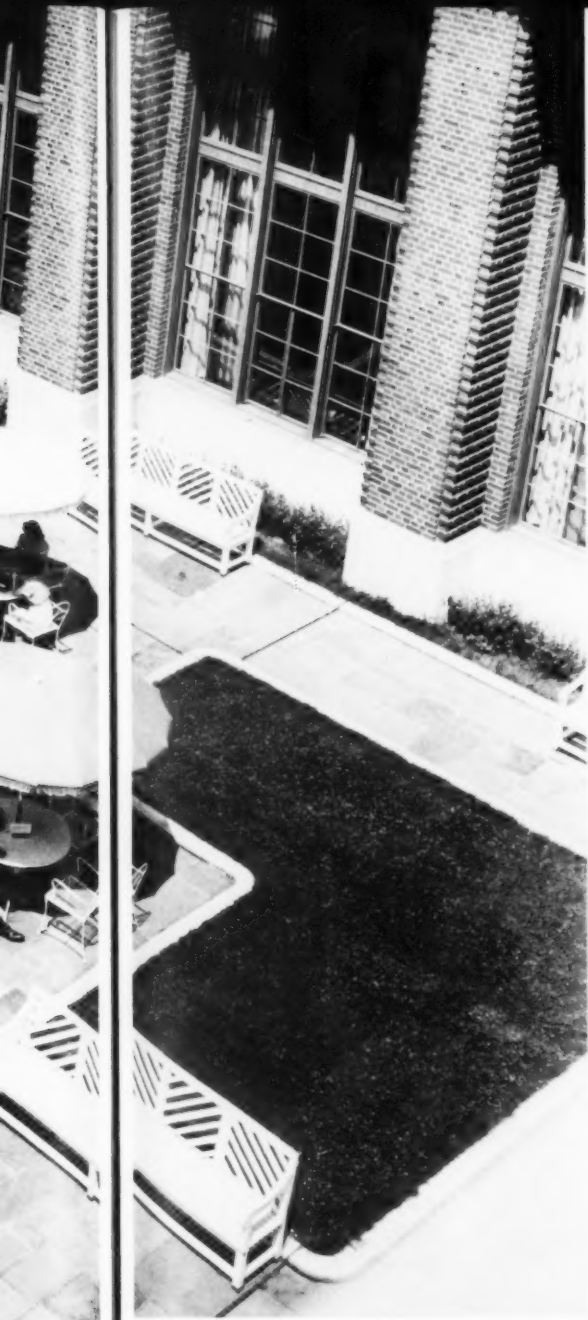
SOUTH TERRACE

DINING FACILITIES

A TOTAL OF 3,400 can be served at one sitting in the restaurants, dining rooms, cafeteria and lunch room. On the ground floor is a spacious cafeteria with tables and booth space for 650 persons. During the noon serving period, the room customarily accommodates about 2,000. Nearby is a grille for light lunches to be served quickly. On the basement level, the lunch room for students who bring their lunches with them seats 1,200 at one time. The Terrace Café, with waiter service for 125, is in the right wing of the first floor, adjacent to the balcony overlooking the ballroom. This room opens out onto the south terrace, which is furnished in summer with lawn furniture and is used for outdoor dining. In the left-hand wing of the building, convenient to billiard and games room, a soda fountain room for serving soft drinks and ice cream has seating space for 175. This room also opens onto the south terrace. Other dining rooms in the building include a large private room in the center of the third floor which is used for banquets, small parties and dances; 12 other dining rooms on the third floor and the faculty campus club dining room with its own kitchen on the fourth floor.



QUICK LUNCH GRILLE



CAMPUS CLUB DINING ROOM



TERRACE CAFE



CAFETERIA — general view



CAFETERIA — serving counter



WOMEN'S LOUNGE—west wing of second floor



16 BOWLING ALLEYS at the basement level

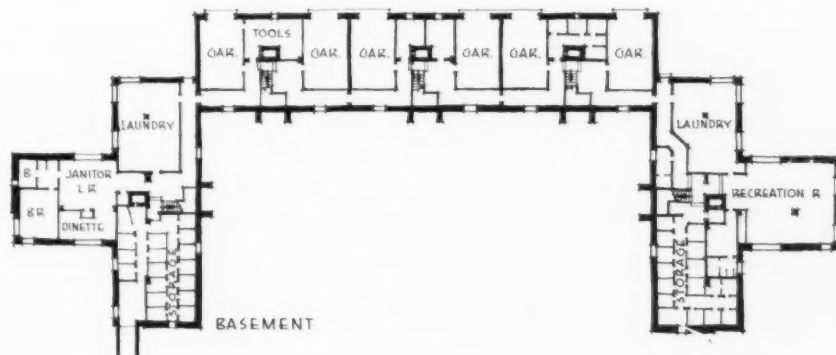
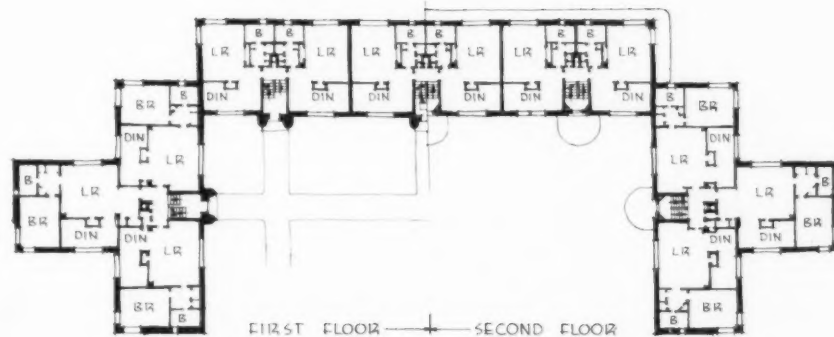


THATCHER HALL

OFFICE OF C. H. JOHNSTON, Architects-Engineers
PROF. ROY JONES, Consultant

THATCHER HALL is an apartment building for married students and instructors who are continuing their studies for master's degrees. Located on the Agricultural School Campus in St. Paul, it consists of 36 apartments and the caretaker's quarters. Half of the apartments are made up of a living room with wall bed, kitchenette, dinette, bath, wardrobe and closets. The remainder have an additional bedroom. In the basement are trunk space, laundries, drying rooms, storage and garage space and recreation room.

The structure is of reinforced concrete with face brick and cut stone trim exterior. Walls are backed with load-bearing clay tile; partitions are of plaster tile; floors, mastic tile. Doors are enameled wood; frames are of hollow metal; trim is pine and birch enameled. The windows are wood casements double-glazed and screened. Steam heat is supplied through a tunnel from the central heating plant. Total cost exclusive of furnishings was \$160,000, or 44½¢ per cu. ft.



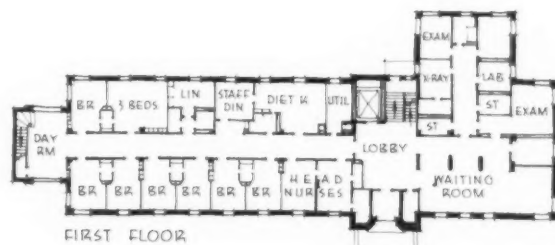
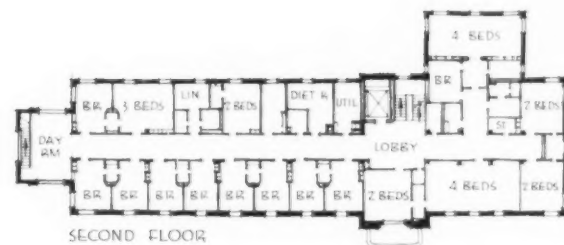


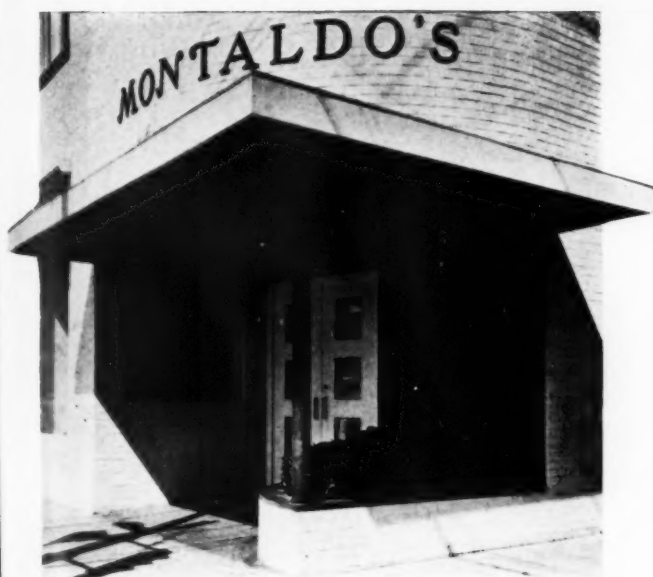
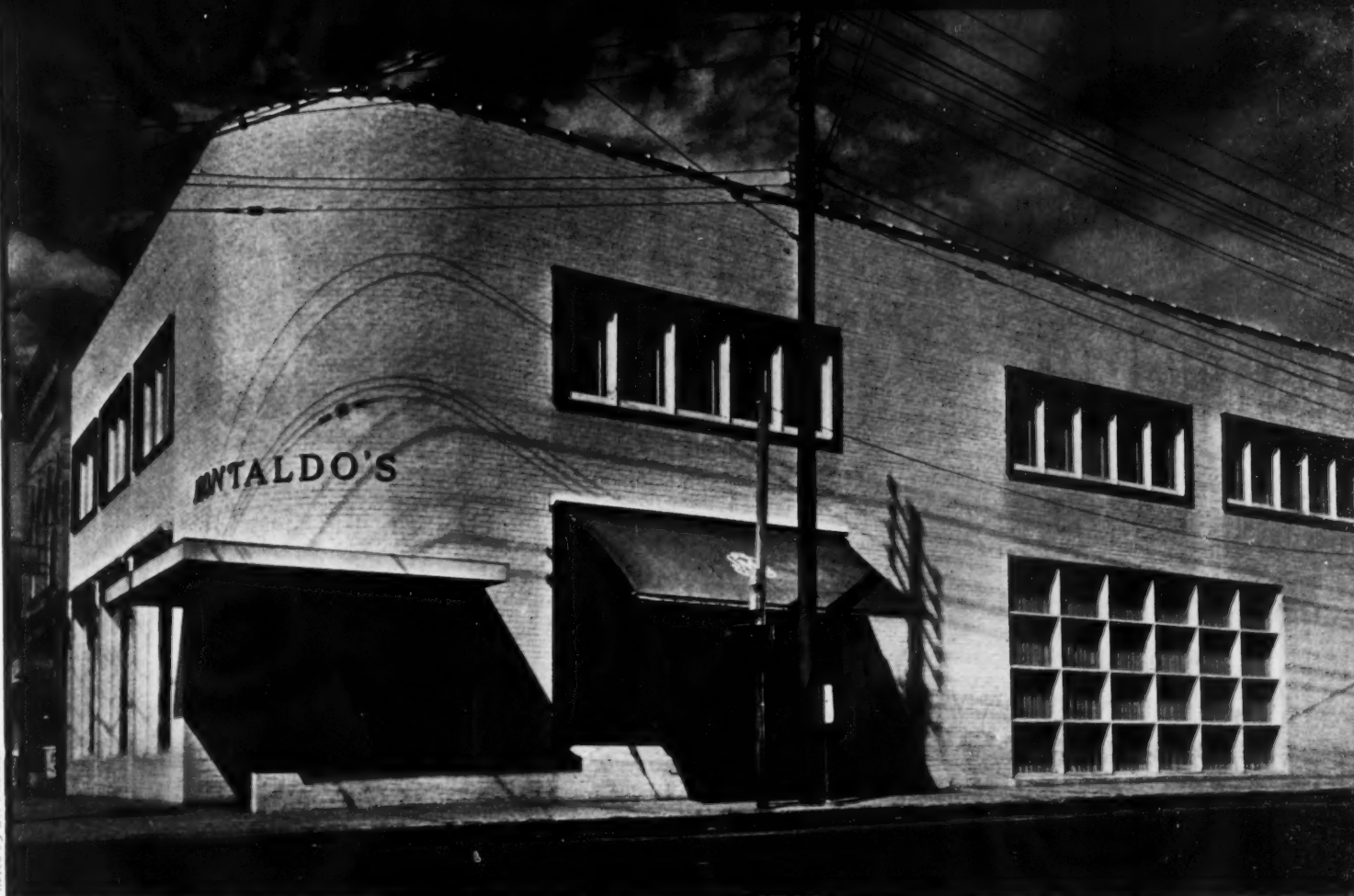
HEALTH SERVICE BUILDING

OFFICE OF C. H. JOHNSTON, Architects-Engineers
 PROF. ROY JONES, Consultant

ALSO LOCATED on the St. Paul Agricultural campus of the University, this new Health Service Building is for the use of students on this campus with minor ailments and for observation and isolation. The structure is of reinforced concrete with face brick and cut stone exterior, backed up with clay tile and with plaster tile partitions. Floor surfacings include mastic tile, linoleum, terrazzo, and ceramic tile. Millwork is of enameled birch, and doors are of wood with hollow metal frames.

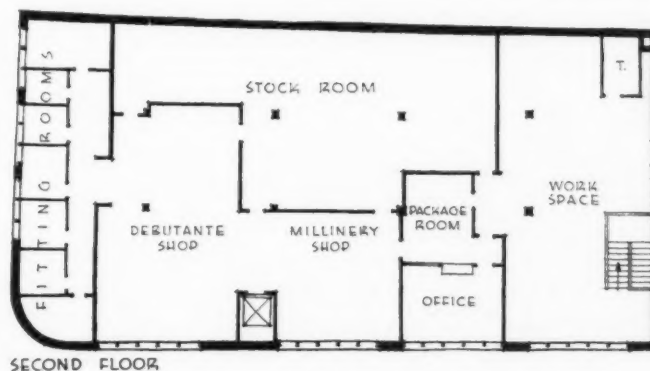
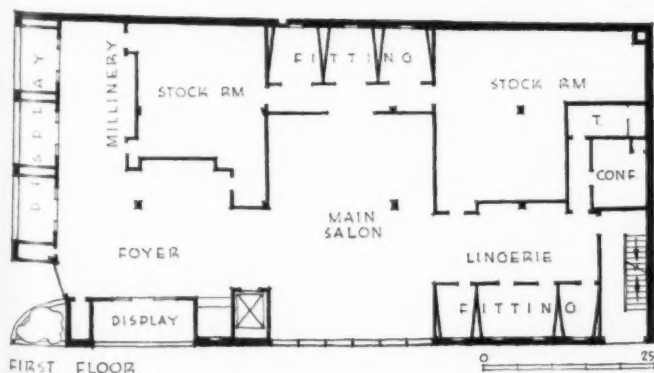
The principal rooms on the first floor are the entrance lobby, waiting room, examining rooms, X-ray room, laboratories, utility and sterilizer rooms, toilets, linen room, diet kitchen, staff dining room, head nurse's room and bedrooms with toilet and lavatory space between each pair of rooms. There is also a solarium on this floor. The second and third floor rooms are similar as to bedrooms and related spaces. The campus central heating plant supplies steam heat to the building. Cost excluding furnishings came to \$100,000 or 43½¢ a cu. ft.





WOMEN'S SPECIALTY SHOP

MONTALDO SHOP, GREENSBORO, N. C. J. P. COBLE, ARCHITECT. Within a 50- by 95-ft. rectangle, the two-story shop is organized to handle two distinct types of merchandise—higher priced clothes on the first floor, less costly merchandise on the second. On the main floor, a minimum of the merchandise is on display, and clothes are shown to individual patrons in the fitting rooms, served by adjacent stock rooms. The salon is used both as lounging space and for periodic fashion shows. The upstairs shop, designed for floor display of merchandise, is supplemented by a sizable stock room. A work space serves both floors. The shop, built for a realty company for long-term lease to the tenant, represents an investment of \$46,500, exclusive of furnishing and decorating. The latter cost an additional \$10,000.



Photos by St. Thomas



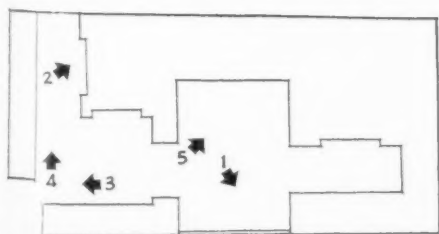
THE STORE is entirely air conditioned except for the stock rooms, into which some of the conditioned air is returned through ventilators. All sales and storage areas are lighted by fluorescent tubing concealed in plaster ceiling coves. Construction consists of a light steel frame bearing on masonry exterior walls; floors are of steel bar joist construction supporting a two-inch concrete slab on wire mesh. The flat, built-up roof is insulated with two-inch-thick insulation board. Exterior walls are of brick painted grayish white. Around the second floor windows and behind the planting box at the main entrance is black terrazzo with aluminum strips. Partitions, except those that surround the elevator and the boiler room, are of wood stud, either plastered (all main areas) or finished in plywood (stock rooms and fitting rooms).



3



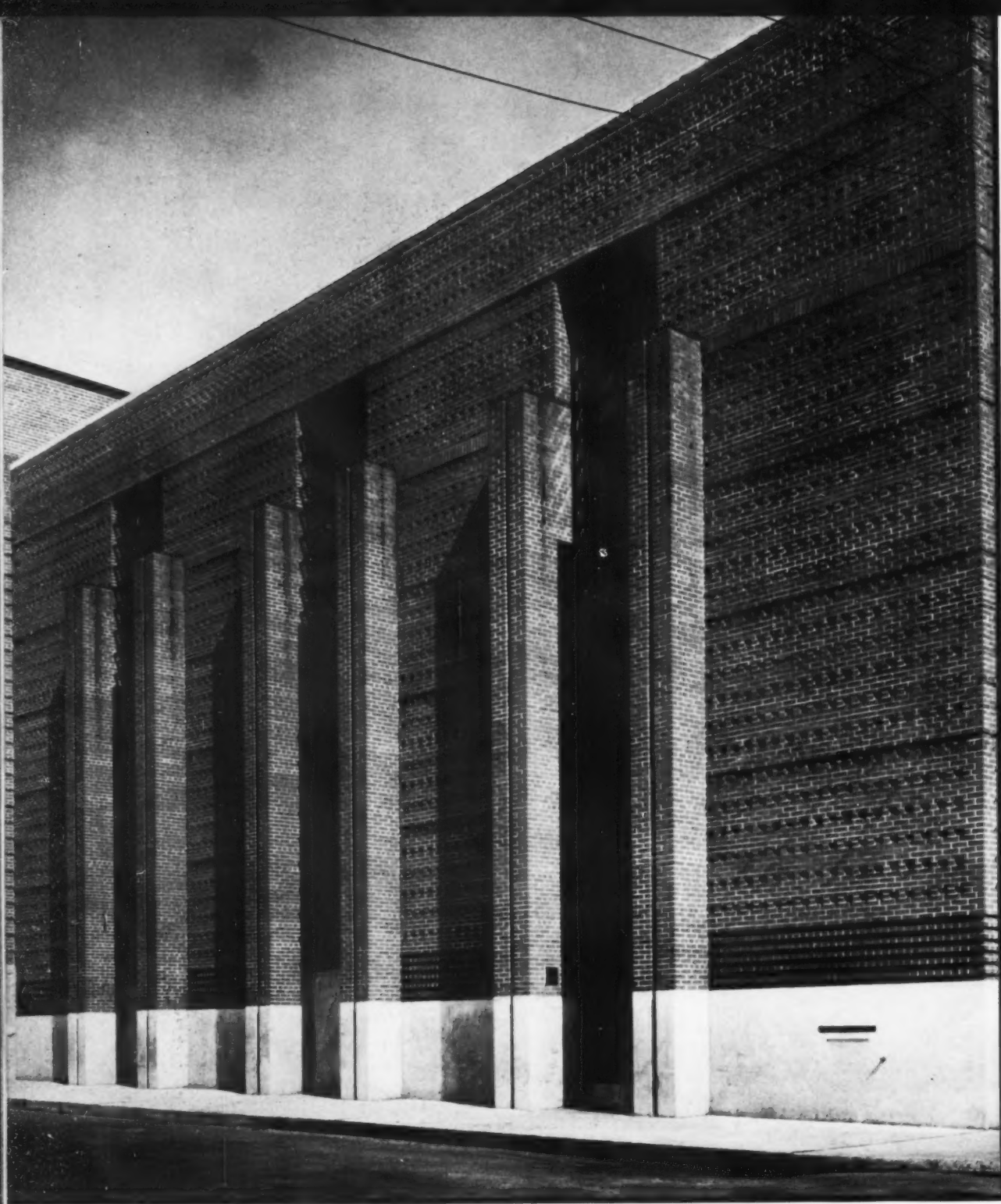
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- 1. MAIN SALON WINDOW
- 2. DETAIL OF HAT BAR
- 3. FOYER
- 4. MILLINERY DEPARTMENT
- 5. MAIN SALON—Fitting rooms at rear

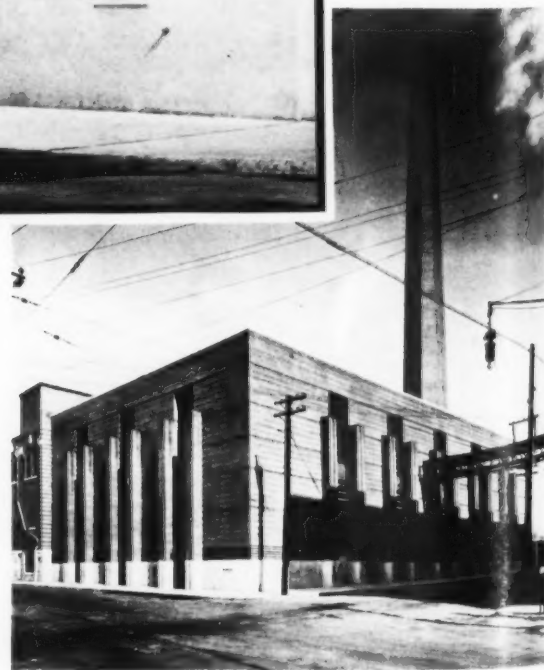
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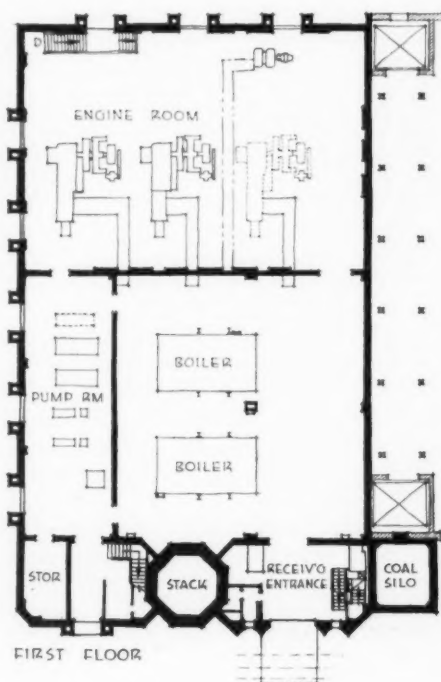
POWER HOUSE

UNITED STATES TOBACCO COMPANY, NASHVILLE, TENN. SCHMIDT, GARDEN & ERICKSON, ARCHITECTS. Constructed to supply operative power to a series of factory buildings devoted to the manufacture of snuff, this new power plant was designed to harmonize with a new unit of the factory across the street. The steel-framed building has exterior walls of red face brick with stone trim. The high stone base was necessitated because the site is periodically subject to partial flood conditions; for this reason also, all pipes below the first-floor level were laid in trenches, and the basement floors were reinforced to withstand water pressure. Interior walls are surfaced with buff glazed brick; flooring is of quarry tile; steel sash of the projective type are mechanically operated.

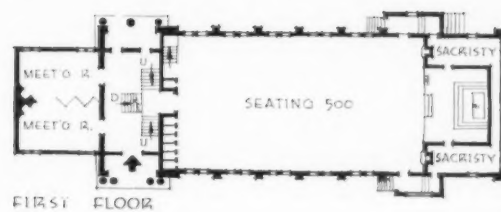
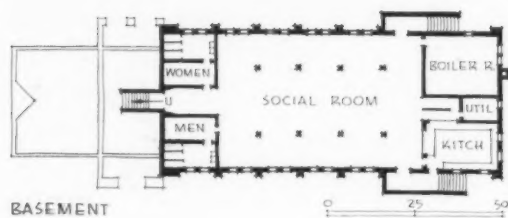
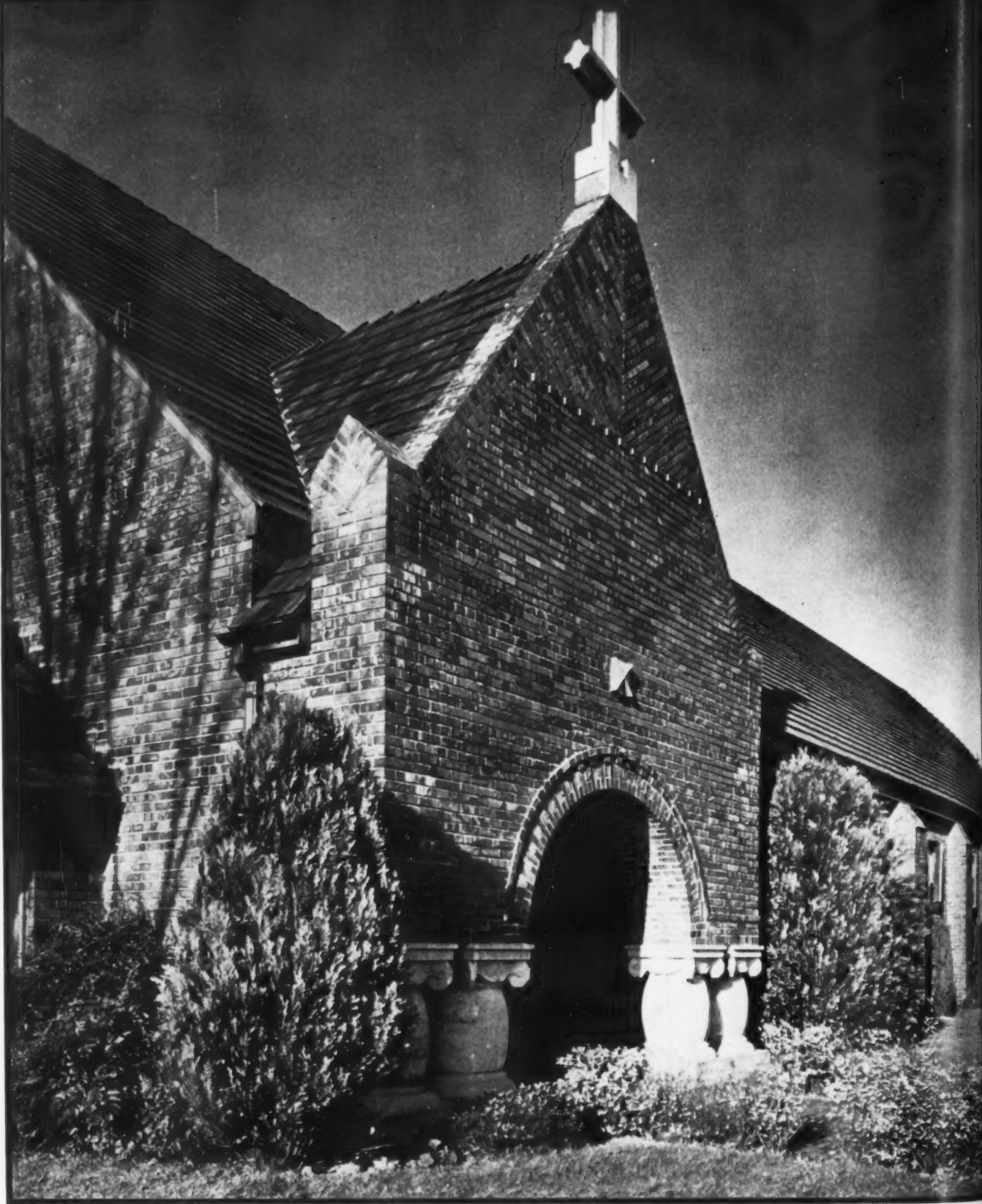




THE POWER HOUSE consists of boiler room, engine room, two stories of pump rooms, overhead coal bunkers, a concrete coal silo and accessory equipment. Two straight-tube boilers with water-cooled bridge walls to have 464 horsepower each at 200 per cent rating produce a final steam pressure of 175 pounds. Spreader-type stokers fire the boilers with coal received from the overhead bunkers.



Photos by Hedrich-Blessing



CHURCH

CHURCH OF THE ASSUMPTION, SEATTLE, WASH. PAUL THIRY, ARCHITECT. This Catholic Church is the first unit of a much larger parochial group which will eventually consist of a church, parish house, school, parish hall and teachers' dwelling. When the project is complete, the present building will become the parish hall. With a minimum of alteration, the upper floor will be converted for social and parochial uses; the lower floor will be used as the school cafeteria. Low masonry walls of concrete ashlar with exterior of select common brick support a high-pitched mill-work roof supported on scissor trusses. Floors are concrete slab with cement finish.



Ernst Kassowitz



Exterior photos by Richard Garrison



PREFABRICATION NEEDS THE ARCHITECT

... and perhaps in this rapidly expanding and constantly changing type of building operation the architect will find new challenges and a field of new opportunities

By MILES L. COLEAN, FAIA

THE ARCHITECT, like the building artisan, is likely to look upon the advancement of prefabrication as a bugaboo threatening the sanctity of his craft. There is no reason for such fear. Prefabrication for the architect, as for the artisan, should not result in loss of work he now controls. On the contrary, it should bring new freedoms to his activity. And it

should open a whole range of new opportunities. It can be harmful only if he insists on maintaining rigidly traditional concepts of ways in which he chooses to work. While prefabrication does not imply extinction, it may call for much adaptation.

The relationship between prefabrication and the architect may be approached through a series of ques-

tions: (1) What is prefabrication? (2) What are its most promising markets? (3) What does prefabrication need that the architect can give it? (4) How can the architect make his contribution to prefabrication? In this way it may be possible to suggest a workable program for the profession in relation to its latest challenger.



Aerial Photo Service

Excellent example of co-operation between architects and contractor in developing designs suitable to extensive prefabrication on the site (in the circus tent, center) is FWA's Avion Village, Grand Prairie, Texas. Architects: Roscoe P. DeWitt, Dallas; Richard J. Neutra, and David R. Williams, Los Angeles. Contractor: Central Contracting Company, Dallas

Prefabrication is a term with a variety of meanings. It may be applied to any number of systems for preassembling or partially preassembling house parts, or it may mean a type of business organization using one of the systems. In other words, prefabrication as a structural method may be used by others than factory prefabricators.

Prefabrication may be, and in an increasing number of instances is, used by operative builders or contractors as incidental to the erection of a large project. Pressure for speed in connection with the government's defense housing program is responsible for the spread of prefabricating methods in contract work; but for several years house builders whose developments were extensive enough have tended to transfer more and more of the fabricating process to the shop, frequently set up at the site. The Wyvernwood project in Los Angeles (AR 9/39) was one of the first large operations to reduce site erection largely to the assembly of shop-produced parts. The Kearny Mesa project at San Diego, now being constructed for the Public Buildings Administration and the Avion project of FWA's Mutual Housing Division at Grand Prairie, Texas, are among the latest.

Sometimes an operative builder adapts design and system to the regular course of his operation, and becomes what might be called a prefabricating builder. When he does so he approaches more closely the prefabricator in the stricter sense of the term. The prefabricator in this sense is a factory producing house parts in accordance with a special method of assembly, usually for a limited range of house designs adaptable to the system.

In contrast with the types of operation mentioned above, where the method is a means adopted to get a particular job done, to the prefabricator the particular job is merely one of a number of outlets for a factory product. The design as well as the system comes from the factory.

The important things about prefabrication, from the point of view of the architect's place in the picture, are the ways houses are put together and the kinds of house produced. The type of prefabrication occasionally used by contractors of large project operations is often little more than precutting of lumber, extended to preassembly of wall frames and roof trusses. Here design is relatively free and the system is, more than not, adapted to the design. In factory fabrication, the reverse is likely to be true, the system and design both being fairly rigid, and substantial variations from stock models being difficult without serious disarrange-

ment of the factory process.

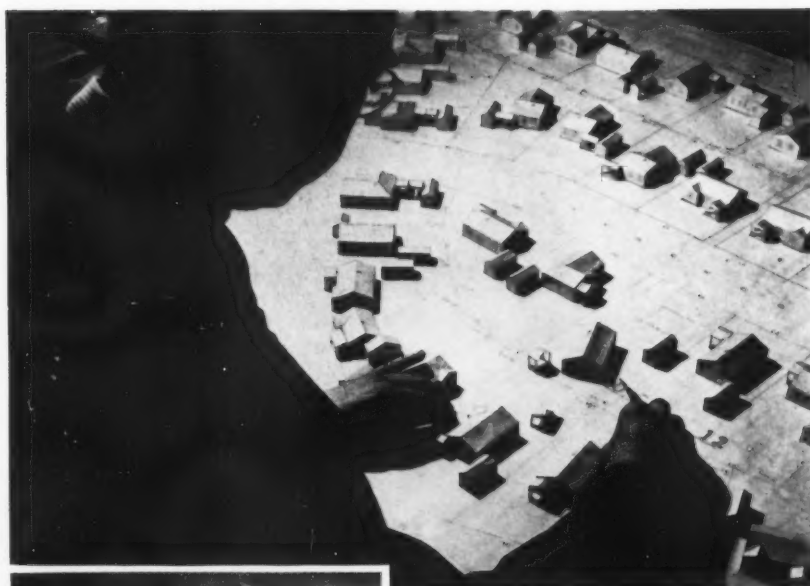
This is particularly true of panel systems, which are the basis of most factory prefabrication today. Almost without exception, factories using panel type design restrict their production fairly closely to a limited number of models. Even the Gunnison Corporation, which more than any other caters to a high priced market, permits no variation that affects standard panel sizes or seriously changes established room arrangements. The reason is clear. The panel is a large unit, built upon specially designed jigs and handled in the shop according to a set routine, frequently on specially designed conveyors. Once the factory is set up for a particular group of models, the job of variation corresponds, on a lesser scale to be sure, to the retooling of an automobile factory.

A few producers have systems that permit of greater flexibility. American Houses, Inc., for instance, which uses a modified panel system supplemented by precutting for the bulk of the structure, disclaims any stock designs, stating that its system is adaptable to a wide range of designs. Its products speak for themselves, consisting as they do of a variety of small one-story houses, some two-story dwellings, as well as grouped dwellings for rent. A different system, developed by the Pierce Foundation and now in use in a large project for workers in the Glenn L. Martin airplane plant, is equally flexible. This system breaks away from the structural panel altogether, using instead a sort of skeleton frame, with spaces between framing members filled with a non-structural panel. Both frame and panel can be varied fairly freely without violating the factory process.

Prefabrication's market and the architect's

The increasing prominence of the government as a purchaser of prefabricated houses in connection with the defense program, and the toadstool growth of new producers fertilized only by the prospect of government orders, tend to becloud the fact that, before the advent of defense housing, prefabrication already was a commercial fact. A number of producers had reached the point of profitable operation. They had, in other words, found a market.

This market, generally speaking,



Photos by G. E. Kidder-Smith



Architects' functions in prefabrication are well illustrated in a Jacksonville, Florida, project by American Houses, Inc. Holden, McLaughlin & Associates, New York, Architects, not only worked out the plot plan with house models, but also had considerable freedom in the design of individual houses in the development



was one calling for a house that could be sold with a lot for around \$4,000 or less. This is not to say that prefabrication is strictly limited to the lower price ranges. Gunnison, for instance, has supplied markets as high as \$7,500 and above, but even this pioneer, on offering a house that could be sold complete in the neighborhood of \$3,000 to \$3,500, found that within a year's time around 60 per cent of production was in the new model. The lowest price, to the writer's knowledge, is \$2,750 for house and land, reached by American Houses, Inc. and C. T. Wills Construction Company at Dundalk, Maryland, an industrial suburb of Baltimore. This is a basementless, four-room-and-bath house with stair to an attic capable of providing an additional bedroom.

Concentration on lower price ranges is easily explained. The market here readily accepts a high degree of standardization if it means a good house for the money. At the same time, the greatest reductions in cost of which prefabrication is capable must be accompanied by sufficient standardization to permit a smooth, rapidly flowing factory routine, as nearly resembling an assembly line operation as possible. And it is interesting in this connection that those firms with most flex-

ible systems tend to deal chiefly with builders who pretty well standardize houses on their own projects.

Another feature of the prefabrication market is noteworthy. Special aspects of the defense program aside, prefabrication has found its chief outlets in low-priced operative-builder projects and in individual small houses principally in smaller communities. Neither low-priced houses nor small towns have been fruitful fields for the architect. From the days of the Architect's Small House Service Bureau to the Registered House Plan of the Federal Home Loan Bank Board, the architect, realizing the problems connected with six per cent and full architectural service on the under-\$5,000 house, has tried to find ways to serve that field. But his efforts have not led to spectacular success. Design of the inexpensive house has been left mostly to the pilfered copy, the magazine illustration, or the plan book and the smaller the community, the more certainly has this been the case.

As things stand, therefore, prefabrication cannot be accused of encroaching upon anything that the architect can properly call his own. For the most part, the prefabricator has turned away from the expensive house and the special-for-one-house design, choosing to concentrate on fields where sound, durable, if standardized, shelter is more important than indulgence of personal idiosyncrasy, and where, more important from his point of view, all our statistics indicate a steadily continuing demand through defense and aftermath for many years to come.

Taken in this light, the architect may feel secure from any new threat to his position. Perhaps he is safe from new encroachment. Perhaps he can let prefabrication alone on its side of the street while he works his. But if he does, he will probably have written the last chapter in the long, persistent effort to be something more than the servant of the well-to-do, so far as private housing is concerned. He will have to acknowledge a limitation he has never fully admitted. More than this, he will probably lose to himself the use of a new tool which, *in his hands*, might not only give him broader scope and freedom but also give prefabrication new opportunities as well. The architect and the prefabricator may be able to go their separate ways; but

if they can find a way to travel together, there will be mutual advantage in doing so.

What the architect can bring to prefabrication

The processes of prefabricated construction do not change the basic character of the house as a complex enclosure protecting the family from weather and providing for the varied activities of family life. Need for design is no less evident when the enclosure is produced by a system of panels than when it is nailed to a balloon frame. A house needs design for economy, convenience, comfort and attractive appearance. It needs design also in the larger sense of its relationship with its neighbors.

Up to the present time, prefabrication has not been notable for the ingenuity or beauty of its design. Its preoccupation has been with the host of new engineering problems that prefabrication has introduced into house building—selection of materials suited to prefabricating methods, development of the structural system, design of equipment that would assure precision in manufacture, layout of equipment and process to provide for efficient, economical, and rapid production. To these problems the old methods of house building brought no precedent. And in addition to such pioneering tasks, new problems in labor organization and in transportation and distribution confronted the prefabricator.

It is not altogether surprising that in his absorption in these new concerns he may have taken too much for granted in so old an element as design. Certainly there is little evidence here of the same preoccupation that has gone into other aspects of the job. Floor plans for the most part hark back to the limited suggestions of a little pamphlet that was published by FHA in 1936 simply to show the house building world that a low-priced house was possible. Exteriors—as a visit to the agglomeration of prefabrication at Indian Head, Maryland, will demonstrate—are also strongly suggestive of the unintended parentage of this pamphlet. Where prefabricators go beyond this, it is usually only to add applied doodads and a canopy over the front door.

Selling, as prefabricators frequently do, through dealers on a

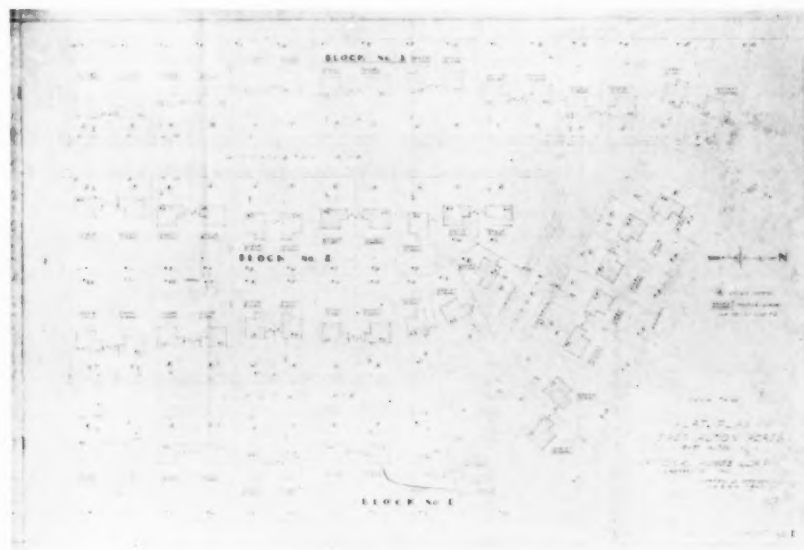
house-by-house basis, neither the prefabricator nor his dealer has contributed as much to good neighborhood design or the setting of the house generally as has the operative builder. The prefabricator has been quick to take the point of view that his responsibility rests only in the parts that he furnishes, and his tendency has been to limit his activity as much as possible to factory operation. But a good house requires a pleasing environment as well as a sound structure and an attractive design.

To these blank spaces in the prefabricating picture, the architect has an opportunity to make a great and obvious contribution. The situation as it stands is much as if in the automotive field the design of the car were left to the production engineer. To take a phrase from the industrial world, the prefabricated house badly needs styling—styling of a kind that the architect is trained and equipped to provide. It requires a reconsideration of the house plan as a group of vital relationships between structure and function, with function studied, on the one hand, in reference to specific needs of the kind of family for which the house is intended and, on the other, to limitations imposed by

the structural system. It requires a similar relationship of these elements to the exterior form and appearance. This sort of styling job is no new story to architects.

In the setting of the house, the architect's talent may also be used to advantage. The ability to handle orientation and planting as adjuncts to design, and to use the single house as a unit in the block or neighborhood design is one part of the architect's stock in trade. It is not apt to be found in the kit of the salesman or erector in whose hands selection of site and location of houses are now usually left.

There is yet another way in which the architect may contribute to the advancement of prefabrication. At the present time the prefabricator is limited to markets to which a high degree of house standardization is acceptable. We have seen that even the producers with the most flexible systems generally provide design variations only for large orders. With the co-operation of architects, thoroughly acquainted with the adaptabilities as well as the limitations of prefabrication, it might be possible to go farther in producing structural units suitable to a wider range of individual treatment. For the prefabri-



Plot plan and exterior of a typical house completely prefabricated by National Homes Corporation, of Lafayette, Ind., for a 55-house FHA Title VI development at East Alton, Illinois. Priced to include lot, five-room house, basement 24 by 24 ft., landscaping and financing at \$4,250



cator, this co-operation would mean an entrance into a field now as difficult for him as is the low-priced area for the architect. For the architect, the availability of such units would vastly simplify preparation of working plans, details, and specifications, not to mention the present problem of supervising the assembly of numerous unrelated parts and the numerous crafts necessary to deal with them.

How it might be done

How the architect can play his part is probably the most difficult of the questions that we have tried to answer. Most architects are notoriously poor gate-crashers. Yet without some vigorous selling on the architect's part, the industry in its present concentration on other matters is not likely soon to come pounding at his door. What is required of the architect is a recognition and understanding of a new field of service and the will to adapt himself to it. And here the classic concepts of his relationships and his prerogatives cannot always be maintained.

Prefabrication introduces new disciplines. In it there is no place for deferred decisions and changes on the job. Here all thinking must be done in advance, and decisions once made must stay made. Work with prefabrication calls for great precision, for an understanding of the machine, and a respect for the machine process. In approaching the field, the

architect must be aware of its limitations as well as its opportunities. Perhaps the fear that the architect will not understand these things has created a hesitancy in the prefabricator. That fear must be overcome by a thorough knowledge of the extent to which design must lend itself to the jig table, the conveyor line, and to ease of handling at the site.

Prefabrication often calls for new concepts of architect-client relationships. This is especially true for any relations he may have with factory prefabricators, for here he will often have to reverse his usual position as a consumer's aid to that of a producer's aid. His position becomes in many ways analogous to that of the industrial designer.

He may, as some architects have done, become a prefabricator himself, or part of a prefabricating organization as participant or employee. He may become a dealer for a prefabricated house, keeping direct control over the placement of the dwelling, its planting and decoration.

Or, retaining more purely his professional status, he may serve the prefabricator in a consulting capacity, undertaking the styling of the house and adapting the house to meet requirements of large project orders, where his training especially fits him to handle the intricate site arrangement problems that necessarily accompany large developments. American Houses, Inc., pioneer in so many phases of prefabrication, has done some notable pioneering in

this one, with results that speak for themselves.

With a narrower scope, the architect may act as consultant to the dealer, especially where the dealer, following the operative builder's lead, conducts his business on a neighborhood rather than a scattered, piecemeal house basis.

Still other relationships with the new methods are possible. Use of prefabrication other than factory prefabrication in connection with contracted work, especially on the large job like the Wyvernwood example, has hardly been explored. In such cases the architect can work out design and assembly system together, suiting the one to the other, without losing the individuality of his design or sacrificing the economies of the production method. Here he turns prefabrication to his own uses, and without losing his identity as an architect, resumes something of his ancient role of master-builder.

The opportunities are wide and the means of capturing them are many. Prefabrication has advanced to the point where precise, durable, and practicable structural systems have been devised. It is rapidly solving its problems of factory organization and line production. Its next step should be to advance its design to a place at least parallel with its engineering techniques. To accomplish this, it needs the architect. And the architect could use the business. The time is ripe for a collaboration profitable to both.



Precutting of all members and preassembly of frames are speeding construction of 3,000 defense housing units at PBA's Kearny Mesa project, San Diego, designed by the office of the Supervising Architects, PBA; built by McNeil Construction Company and Zoss Construction Company

PROGRESSIVE PRACTICE IN THE SMALL OFFICE

OFFICE OF VICTORINE AND SAMUEL HOMSEY
WILMINGTON, DELAWARE

By HENRY H. SAYLOR, AIA

All photographs by the author.

ONE WHO PUTS his bets on heredity would have a field day with the Homseys. Tradition has it that in every one of the last nine generations of Victorine duPont Homsey's family there has been an architect. Samuel Eldon Homsey's father was a master builder who helped bring modern concrete and steel construction to the Near East, and behind him there has been a builder in every generation as far back as the family records go.

Thus it is not particularly surprising to find that both Mr. and Mrs. Homsey are registered architects and that each has tucked away somewhere a parchment bearing the degree Master of Architecture. The bringing together of two such fully qualified practitioners in a professional partnership is phenomenon enough; their collaboration in marriage and bringing up a family is rather piling it on. Two young sons seem unlikely to break the joint traditions, for on my visit the younger was engrossed in his building blocks, the elder in his steel erector equipment.

"Would you encourage them to become architects, in the light of present conditions and tendencies?" I asked Samuel Homsey.

"Most assuredly! Any uncertainty as to the architect's essential role in the social fabric of today and tomorrow comes from his own failure to measure up to the job. In our opinion there is more need today than ever before for able architects—but they've got to be good, and they've got to have a working knowledge of structural, electrical and mechanical engineering."

"You do not think, then, that the architect may have spread himself too thinly over the more complex problem of getting our structures built? You know there are those who believe the architect must know about real estate, finance, social economy and a lot of other things in addition to design."

"So far as our observation goes, the architect might well avoid most of these bypaths and stick to his main road, which is designing structures for a purpose, though in this he should not be without a fair grasp of the constantly changing social economy. And in sticking to his course he will have to forge ahead of the engineers. Most engineers are content to support the same old beam on the same old post. Our problems of today are not so simple as that. Imagination is the ingredient needed, and the architect is temperamentally better qualified to supply it than is the engineer with his handbook."

When I asked them about all the talk of organized publicity for the profession, they expressed general agreement with the thought that the public should be better acquainted with the architect's function. But they mentioned the



SAMUEL and VICTORINE HOMSEY, with Theodore Fletcher as associate, are representative of a large segment of the architectural profession the country over—three architects working together in a small office, combining talents on a wide variety of design problems. Simplifying office arrangements and methods to the maximum consistent with systematic operation, these three have turned out approximately a million dollars worth of building in the past year.

SAMUEL HOMSEY, AIA, got his architectural education at Massachusetts Tech, and a financial goad drove him through the school in quickstep time. He entered in 1922, came out four years later, but in addition to the regular Bachelor of Science degree (now usually earned in five years), he had his Master's degree. Summers between terms, he worked in the office of Coolidge & Shattuck, now Shepley, Coolidge, Bulfinch & Abbot. After graduation he entered the Allen & Collens office, then with another chap won a competition for a fire station in Texas and went down to build it. A job as superintendent of construction opened up down there which gave him invaluable experience in putting up a school, a water works and an office building. Then back to Boston. Frohman, Robb & Little put him to work detailing the north transept of Washington Cathedral, an experience that apparently did not make a confirmed Gothicist of the man, but did hammer into him the importance of the third dimension. Meanwhile he had married Victorine duPont. With the collapse of work in '31 they spent a year and a half studying contemporary work in Europe and a Winter in Mexico, coming back to Boston with a stack of water colors and an itch to produce architecture. And in '35, on the strength of a few small jobs centering about Eastern Shore of Maryland, they migrated to Wilmington.

VICTORINE duPONT HOMSEY studied at the Cambridge School of Architecture and Landscape Architecture, which Smith College took over as its Graduate School. Although her Bachelor's degree and her Master's degree both bear Smith College's name and sonorous phrasing, she has never seen Northampton, Mass. Study of architecture at Cambridge included elementary courses in landscape, and Mrs. Homsey is always glad of a chance for collaboration with a landscape architect. If the latter is not to be employed, the Homseys' drawings are apt to show the planting.

dangers of over-selling average abilities—publicity is apt to picture the ideal service, but will the public always find it? Their own chance of a wider public appreciation, they felt, was to improve their own skill.

I was reminded thus to ask about their convictions on the so-called "modern" styling. The Homseys are certainly not modernists if that means following worshipfully the so-called functional or international style. Nor do they

follow with blind admiration the great designers of earlier periods. In working out an individual problem, they try to free their minds from any preconceived idea of style. What is the building for, who is to use it, where is it to stand? If house, what do the owners want—a background for themselves, a setting for their furniture, a purely functional machine for living?

This is not to suggest that they are merely "yes" men, rather that they try to produce an honest expression of a given set of conditions, avoiding the use of exotic or superficial decoration, trying to remain uninfluenced by what is the current "smart" thing to do.

Samuel and Victorine Homsey express these fragments of their philosophy, not at all in the tone of elder statesmen who have been over the whole course and know its turns and pitfalls. Rather does one have to pry these observations from them as tentative reports of progress.

Having come this far, their findings at the moment are thus and so. Next year these may have to be revised on the basis of further experience.

What impresses me, however, as a detached observer, is the amount and wide scope of work accomplished in just six years, and particularly the degree to which the Homseys' practice has been made a highly personal service.

Among the jobs that have passed from the stage of preliminary studies through the turning over of the keys are houses costing from \$5,000 up to six figures, nursery schools, hospital, museum, theater, industrial plant, beach clubs, farm buildings, alteration of banking quarters, restoration of historic monuments, machine shop, motor vehicle building for the state, and a whole residential community. Today there are seven active projects in the office. Last year the partnership must have designed, I should judge, not far from a million dollars' worth of building.

SIMPLIFIED OFFICE ARRANGEMENTS SPEED CREATIVE WORK

How much of an organization has it required to turn out the partnership's conceptions—how many draftsmen? Well, that depends upon what you mean. The answer might be, none, or it might be, three, if you count Mr. and Mrs. Homsey and Theodore Fletcher, an associate. There are no others, not even a secretary, not even an office boy. There is correspondence and typing to do, of course, but it is kept to such a minimum that a public stenographer takes care of it on call.

A door in a downtown office building bears the legend:

ARCHITECTURAL OFFICE OF
VICTORINE HOMSEY
SAMUEL HOMSEY
THEODORE FLETCHER

and it opens into a single room about

12 x 14 ft. in area. There is no reception space divided off, no easy chairs, no closets, not even a lavatory. Two ample drawing tables are supported by drawer sections: a bookcase section, a four-drawer file and a typewriter table complete the furnishings, unless you count the four or five high stools. Mr. Fletcher is usually busy at one board, Mr. Homsey occasionally at the other. Client conferences, the Homseys find, are nearly always scheduled for the client's office or home, or the Homseys' home, about which I'll have a lot more to say later.

The case for drawings, supplies, books, and files are all made of painted five-ply wood, dimensioned to serve as interchangeable units. Nothing appears crowded. In the four-

drawer file, one drawer is given over to job records, one to data on materials and techniques, one to general correspondence and one to office supplies. The materials file fills perhaps half its drawer. "We don't keep data about products for which we can foresee no need. It would be out of date when sought. And we don't keep anything that is merely a repetition of what is in Sweet's. But you will not see any notice here to the effect that salesmen are seen only between four and five p.m. on February 29. We really like to talk to men who know their products."

On top of the taller cases are cardboard models—aids to clients' understanding and to design, in the making of which Fletcher wields a dentist's probe and a razor-sharp pen-



EXTERIOR of house the Homseys built for themselves, with separate studio wing

knife with consummate skill.

It was some time before I discovered what it was that differentiated this little office from all others I have seen. There are no samples about! "We have no space for them and wouldn't give it if we had. Why keep a sample panel of bricks or a piece of waxed veneer any longer than you would keep a shop drawing?" Samples are brought in on request, and, on almost synchronous request, taken away, their purposes having been served.

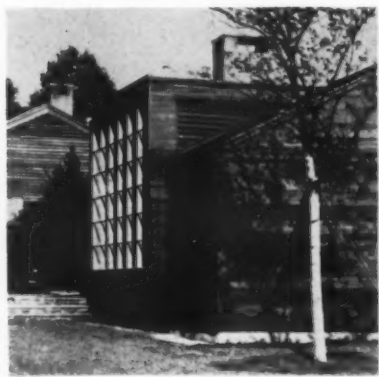
Books in the office would probably not fill a five-foot shelf. Most of them deal with regional variations of our own architecture—characteristic examples of earlier work in Delaware, Pennsylvania, Connecticut, Virginia. On the studio shelves in the Homsey home there are more of the same; a representative selection of contemporary work abroad; a complete file of the leading architectural journals both of this country, and until recently, of Europe; some Gothic works; and a surprising number of titles on the fine art of painting.

The Homseys tell me that they glean much useful data from the advertising pages and the technical material in the architectural journals. Current magazines are kept intact for about three years, and frequently thumbed through; sometimes in search of an answer to a specific question, sometimes merely as relaxation. At the end of the period the pages that have held their interest are cut out and filed in cases, arbitrary classifications separated by adjustable slides of wallboard.

A small downtown office and a specially designed home studio is a combination that works well for this "three-man" office. A one-bay, 12-by-14-foot office is sufficient for business needs; Mr. and Mrs. Homsey put in their long hours in the studio at home, free from office routine and interruption

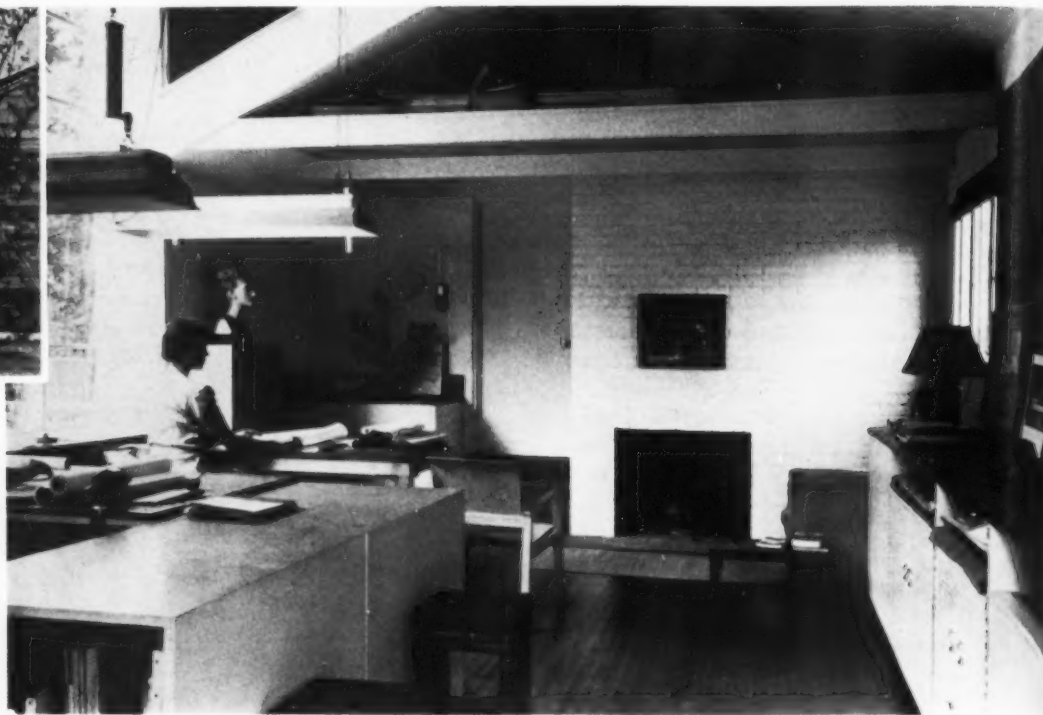


DIAGRAM AND PICTURES OF HOME STUDIO OVERPAGE ➡



STUDIO WINDOW

Not just a hybrid living room, the Homseys' home studio is a carefully designed home workshop. For the daytime hours, a high north window provides ample daylight; for the evening stretches fluorescent tubes in adjustable hoods give a fine light for either drafting or painting. Specially designed cabinets and a closet with sink for the painting help preserve order.



GENERAL STUDIO INTERIOR

The work room AT HOME

Last year Mr. and Mrs. Homsey built themselves a house in the country, out on the famous Lancaster Pike west of Wilmington. An important element of that house is the studio. It isn't a hybrid living room, it is a work room, off in a wing of its own. Here is where the Homseys' architecture has its birth. Two large drawing tables stand by a high north window. The ample daylight, or rather a close approximation of it, is prolonged into the night by overhead metal hoods carrying fluorescent tubes. There are two four-foot tubes in each, one a "daylight," the other light amber—a mixture which Samuel Homsey finds perfectly satisfactory not only for drafting but also for painting in oils or water colors. The photographs and isometric convey some idea of how completely this room has been designed to afford every aid to efficient work, either by

day or through the evening.

First conferences with clients are practically always attended by both Mr. and Mrs. Homsey. The problem having been discussed, and the essential needs, location, available funds and limitations having been noted, an evening finds the two partners developing tentative schemes. Sometimes Samuel Homsey does the drafting, sometimes Mrs. Homsey, with the other partner kibitzing from across the board.

"If we were to keep time and cost records of these evening sessions, they would undoubtedly prove that we were usually losing money," said Mr. Homsey. "It all depends upon whether we call these evenings work or play."

Perhaps a tentative scheme will carry through evening after evening. On the night I spent with the Homseys, the fourth set of microscopic sixteenth-inch scale plans of a house

were in the making, and the partners were not yet convinced that something still better could not be done with them. Possibly the obvious solution finally emerges when eyes and hands are too weary to get the details down on paper, and the Homseys call it a day and go to bed. Next morning no commuters' train, no nine-o'clock office hour, blocks the completion of the sketches. Frequently these are the simplest pencil outline perspectives, enlivened by a touch of pastel, but with almost no entourage. Approved by the client, they go to the office and, usually in Fletcher's capable hands, are translated into working drawings.

An unusual week-end rush may find all three of the architects *en charrette* making working drawings and writing specifications, but ordinarily the work—or play, if you will—is not permitted to break the even tenor of an active and joyful life.

INFORMALITY OF METHOD MAKES FOR SYSTEM WITHOUT A STRUGGLE

If my first hasty inspection of the office brought the thought that here was a practice lacking in system, that premise was soon upset. There is system here, but it doesn't run to voluminous written records. No decision is reached with client, contractor or

material man without a brief note in an office diary. But instead of calling in a secretary and dictating the facts to be typed in a triplicate letter, the client is merely asked to initial a blueprint bearing a red-pencil note of explanation or cost or whatever af-

fects the original signed contract.

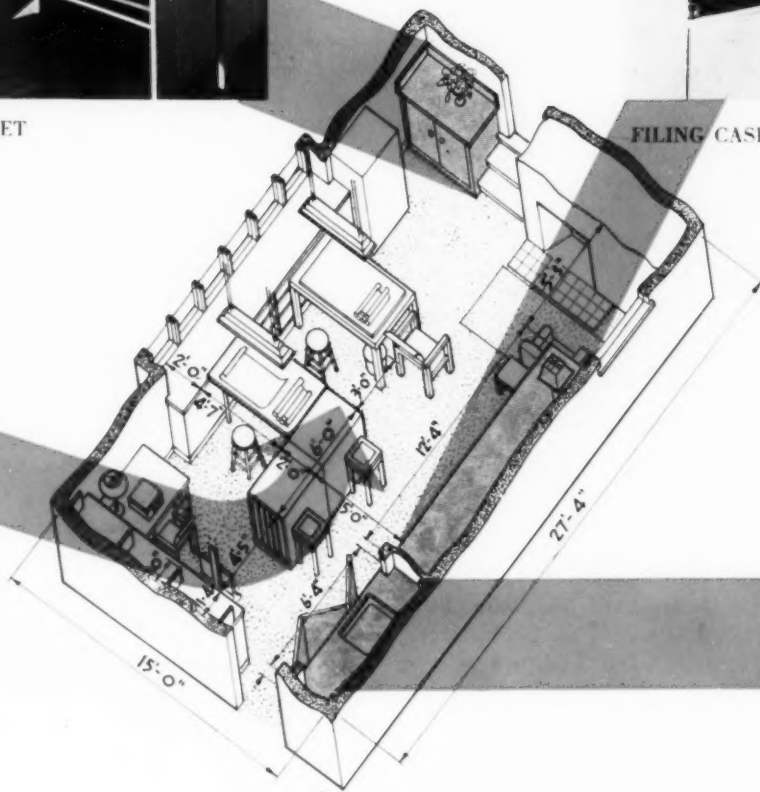
Change orders, certificates for payments, yes, but no printed forms—merely a typed letter sheet. The agreement between architect and owner is a letter; the formal contract between owner and contractor, the



CABINET



FILING CASES



STUDIO CLOSET

standard AIA form. Time sheets are kept, but are not permitted to form an excuse for engaging a bookkeeper. The blueprint order book's carbon copies show what was ordered and for whom. Occasionally a job for the State or City calls for more detailed records and a sheaf of carbon copies; on rare occasions a commission accepted on a cost-plus-fee basis entails special accounting. In such cases, the time sheet, traveling expenses, cost of prints and a periodically computed overhead are available, but the usual run of jobs does not call for detailed analysis.

This periodically computed overhead, used when a commission returns actual office costs plus a flat fee, includes rent, telephone, postage, office stationery and supplies, license fees, but no salaries. These overhead figures are occasionally added up for a three-months' period to strike an average cost per working day.

"How do you know whether you make money on a job or lose it?" I asked.

"We don't," was the frank reply. "nor does the doctor, but we know whether we're making or losing on the office practice by looking at our bank balance. Probably a set of books, like those Mr. Bergstrom devised for an architectural office, would tell us a lot more things about how we make a profit, but we're not particularly interested in knowing. Very likely we'd find we lose money in doing a small house with many unusual requirements, but when the next commission of that kind comes along and looks interesting, we'd hate to think we had to turn it down."

Homsey specifications come about as near to shorthand as it is possible to get. They are carefully divided by trades and never set forth mixtures, tests, techniques and the like if they can merely cite authoritative stand-

ards established by those trades. "Scope of work" is likely to be avoided in words when it is explicitly shown on the drawings. Carbon-backed typed sheets are usually blueprinted, but since the cost of these has risen to six cents a page, experiments are being made in search of a less expensive process. On the recent convention trip to California, William Wurster showed the Homseys a scheme he had developed. He takes a sheet of tracing paper the size of the contract drawings, reduces it to 8½ inch width by accordion folding, and types upon this. Unfolded, the sheet is blueprinted with the drawings.

Working drawings and supervision

Working drawings are kept uniform in size throughout a job, even though large-scale or full-size details may require a folded sheet. Eighth-inch scale prevails for plans and elevations, worked up from sixteenth-

inch sketches. The more common quarter-inch is rarely used. The drawings seem almost microscopic to my eyes, but Fletcher's inch-long needlepoint of lead gets it all down on the tracing paper with little loss from the contrast of ink on linen. Incidentally, he varies the grade of his lead with the prevailing temperature and humidity—F or even H in dry cold weather, HB or B on warm damp days. Originals which had sired 75 blueprints showed no perceptible deterioration in contrast.

After a job is built, the working drawings are not rolled in tubes in the usual way, for dead storage. They are folded and filed vertically in heavy flapless envelopes in the Homsey house, freeing the flat drawers in the office for active projects.

If the Homseys economize on the size of small-scale drawings, they are spendthrifts on detail. Contract drawings that hold the plans and elevations to two or three sheets may include three or four times that many sheets of half-inch details—half-inch rather than three-quarter. Nothing is left to the contractor's imagination, or improvisation. Arguments as to just how a certain window head or door buck is to be built are quashed before they can arise. As a result, competitive bids are bracketed within close extremes and there is less opportunity for the corner-cutting builder who might bid low and get by on his own interpretation of ambiguous drawings.

The Homseys believe firmly that the chances of producing a good building with an unqualified builder are slim indeed. They invite bids from a few carefully selected builders, except where public work requires the catch-as-catch-can procedure in which anyone is a good builder who can put up the required bond.

Supervision of projects under construction is done by either of the Homseys. After two unfortunate experiences in allowing their designs to be carried out at some distance from Wilmington without personal supervision, the partners have foresworn any such arrangement. What they design henceforth, if it is to be built, will be built under their own eyes.

They have no frozen convictions as to the best materials to be used in a given case, even though the specifications may be explicit. Substitution of products is permitted upon convincing evidence, and changes are often

found advisable and even beneficial. Present-day practice surely calls for an open mind in this respect—so much so in these days of priorities that the Homseys, like most active architects, think in terms of alternatives during the early stages of the design, and retain control thereafter.

My questions regarding the future of the architect seem partially answered in the preceding paragraph. To the extent that we can see ahead, the architect's main job lies in answering the brusque challenge of today's building conditions. Difficulty in obtaining accustomed materials should, the Homseys think, lead to a simplification of operations, a directness of approach, a broader economy of construction, and a franker, more virile architecture. The architect who achieves these things will need no further justification in the minds of the building public.

Jobs and clients

Outside activities engage both partners. Mrs. Homsey in particular is interested in anything that has to do with the improvement of the landscape. Samuel Homsey is vice-president of the Institute's Delaware Chapter and has served as its secretary and treasurer. But I picture neither one as a chronic "joiner"—the appeal of that home and its workshop studio would seem to out-pull any but the really vital community services.

How do they get jobs? As far as I can judge, they don't go out and get them. Jobs come in from the most unexpected quarters. Usually the prospective client has seen something the Homseys have done and has liked the way it looks and functions. The partners early set their faces against scheme projects and the accompanying free sketches. "If we can get the site, and capital can be raised for the building, show us what you would do"—that familiar theme song, having fizzled out once or twice in the Homseys' less experienced days, is now turned down flat.

"We simply tell them that it isn't considered ethical, and that mysterious word always has shut off further argument."

When services rendered are only partial, the charges are usually on a flat-fee basis. Clients are charged for conferences only when these constitute the whole of the architects' service, or when held out of town; in the latter case traveling expenses in-

clude time out of the office.

It is said of the Homseys that their clients remain their friends. Asked the why and wherefore of this unusual reputation, Samuel Homsey admitted that he could think of no client from whom they had parted on any but friendly terms. And he had a plausible explanation for it. "We never build anything that the client does not fully understand and visualize. At times we go to almost absurd lengths in making sure that he knows in advance what he is getting. It seems to us that most of the friction between client and architect comes either from the materialization of the unexpected—'Oh, I didn't think it was going to be like that'—or from the cost bogey. We do our level best to avoid underestimating what a project will cost. Undoubtedly our bluntness in this regard has frightened off some potential clients, but it certainly has not helped to substantiate the layman's distrust of architects' estimates."

These preliminary estimates by the Homseys are something more than the customary snap guess. In the formative stages of a design they call in manufacturers' representatives to learn actual unit prices and probable installation costs. With these figures in mind, backed by experience in past work, it is usually possible to estimate the various alternate schemes with reasonable accuracy.

After hours

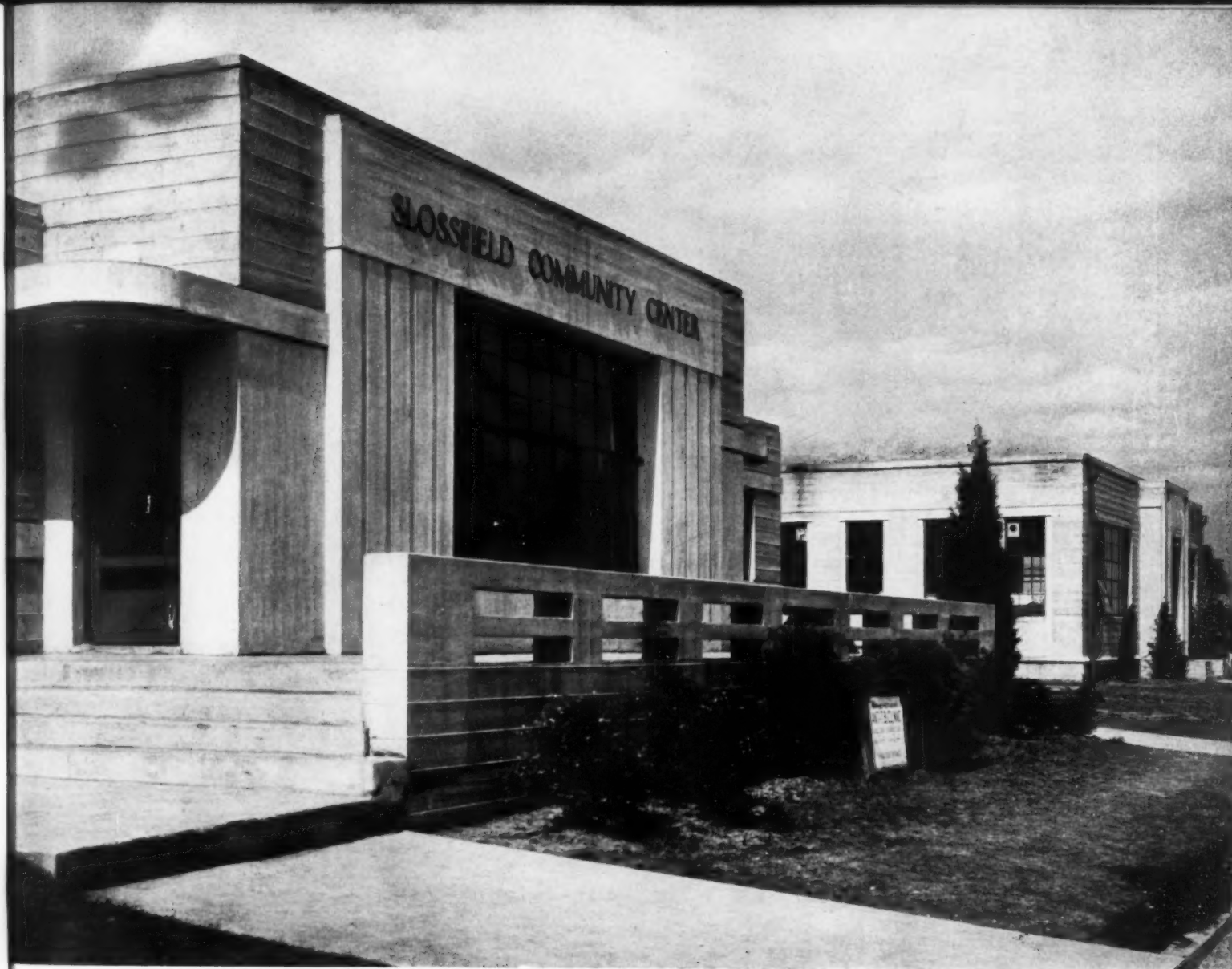
For relaxation, Mrs. Homsey seems to prefer her garden and its development. Mr. Homsey cannot for long be separated from his painting. A New York gallery's one-man show of his work last Winter testifies to his skill. It would be hard to think of Samuel Homsey commuting to a big metropolitan office, tied up by a constant procession of business engagements, a rigid routine. There are times, he confesses, when he doesn't feel in the humor for drafting, specification writing, or supervision, and the chances are that he has little argument with his conscience about it—he just puts paper and brushes into his car and hides out somewhere to paint. With the Homseys' distinctive brand of architectural practice, that sort of truancy hurts no one, least of all Samuel Homsey. He has found but a single disadvantage in the husband-wife architectural partnership—what to do about the more extended vacation periods.

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RECORD



CULTURAL CENTERS

A BUILDING TYPES STUDY

"... MORE PROJECTS ...
THAN IN ALL OUR PREVI-
OUS HISTORY ..." (See page
76.) Above, Slossfield Community
Center, negro youth center in
Birmingham, Ala. E. B. Van
Keuren, AIA, Architect. Right,
civic auditorium, Burlington,
Ia. Robin B. Carswell, Architect



Photos courtesy Portland Cement Assn.



CULTURE RETURNS TO MAIN STREET

By ROLAND A. WANK, AIA The architect, with the technician,
helps weave a modern cultural pattern

CULTURE is "the training or refining of the moral or intellectual faculties"—if my dictionary may be trusted. Whatever it is, it used to take care of itself in simpler civilizations. To wring one's primitive living out of the unconcerned universe implied proficiency in the useful knowledge of the time; nature and physical exercise came in abundance; song was part of normal behavior; art was something used daily to fashion houses and articles.

In our highly specialized industrial civilization knowledge is taught in schools; nature, diluted with hot dog stands, beckons from the other end of long rides; music is dished out at the turn of a switch or drop of a nickel. Art is locked securely behind bronze portals which swing open between 10:30 a.m. and 4:00 p.m. on alternate Thursdays, portals prudently avoided by common folk. Little of our daily sweat and toil relates to "the training or refining of the moral

and intellectual faculties."

Or at least so it seemed a short while ago. But somewhere about the time of that minor fracas called the First World War it dawned that culture had something to do with the survival of nations; and in the current grim tension the amount and kind of culture we individually possess has become of increasing concern to the community. Once supposed to be universal, at least within the western world, culture now comes packaged with brand labels, from "Kultur" at one end to surrealism at the other. Persuasive salesmen peddle it to urban dwellers whose souls are starved on a diet of bleachers and traffic jams and rural folk who brace Main Street storefronts through bleak Saturdays. They are drab, aimless, aching for self-respect; they are ready to be sold; which brands of culture will they buy?

Which is why more projects have been built since the start of Depres-

sion in the general bracket of cultural centers than in all our previous history thrown together. And as Defense deflects progress into new paths, a whole new chain pops up in the USO program described in this issue. Is it too much to hope that these structures be planned for permanent enrichment of the cultural landscape, to serve in peace as well? Schools, health and recreational centers authorized under the Lanham Act are another opportunity for lasting gain.

The variety of facilities included under the concept of cultural centers is as broad as that of culture itself. The editors indicated the range by picking examples from widely separated corners of the field. Grouping of as many divergent facilities as conditions permit is desirable in order to expose users of one to the cultural opportunities offered by the others. Thus a library and an auditorium in conjunction will each be more effective than when placed sepa-



Samuel Gottscho

"...A NEW HIGH..."—revamped
Bronx Zoo, New York City



"...FROM ARTS...TO STAGE...THE SEAMLESS CONTINUITY..."
—Paper Mill Playhouse, remodeled from a factory in Short Hills, N. J., by
Henry Darcey Scudder, Architect. Entrance, lobby and auditorium are shown.
Above the lobby are art galleries; in winter a drama school is operated.
Additions will contain rehearsal space, stagecraft shop. Much of the popularity of this semi-commercial enterprise is due to technical perfection; unexcelled acoustics, good lighting, spacious seating

ately; placed together with social rooms, swimming pool, playgrounds and community shops will come near to quenching the human thirst for all-around experience. Programs may be broadened by interrelation: from arts and crafts to stage setting, from stage to music and dance and athletics, through the seamless continuity fundamental to culture. Moreover, such combination will permit simultaneous enjoyment of appropriately diverse facilities by all members of the family—a very practical way to promote full and widespread use. Joint and interchangeable utilization of parking spaces, washrooms, auditoria, etc., leads to important economies, and so does the combination of operating and supervisory staffs.

Nor are cultural and commercial life necessarily divided by any sharp borders. Merchants' counters and displays and drugstore magazine racks are good sources of education. Rubbing elbows with the Joneses, a

little gossip, and views swapped over a soda or cocktail help to knock jagged corners off citizens and neighbors. Proximity of commercial and cultural centers will not only increase the casual use of either by visitors to the other, but will avoid an artificial demarcation with UPLIFT unmistakably spelled across one side.

The Greenhills center illustrates complete consolidation of facilities in a planned town. It is an abiding virtue of such communities that they offer planners and architects a chance to employ the full arsenal of 20th century technique and the undissipated strength of the community to create designs for joyous living, implicit in the promise of democracy.

Combination of facilities is, of course, easiest in small communities,

whether they be rural or just neighborhood units of larger places. But that something similar is not impossible even in the greatest cities is proven by Rockefeller Center, whose amazing commercial success must be attributed to the imaginative planning which made it into a major cultural center of the world.

Proper location is, of course, requisite for the success of any center, handicapped in a multitude of cities lacking effective master plans and planning commissions. Perhaps in the future rebuilding of America the process may be reversed; cultural centers may be spotted deliberately for communities to grow up around.

Large communities play a special role in that they permit and even require specialization, and thereby

open the way to the creation of special purpose facilities which cross-roads towns cannot afford. The Palm Beach art center is the sort of thing which all medium-sized cities ought to have; the new Bronx Zoo set a new high for contribution by a metropolis to the cultural life of the nation.

A few words concerning design aspects common to all types of structures to which this article refers: Convertibility to multiple uses is an obviously desirable way to obtain the most out of the always limited funds. But scarce as appropriations are for the construction of facilities, it is even harder to keep their supervision and maintenance adequately financed once the drama of construction and the first upsurge of civic pride yield to day-by-day routine. Therefore, maintenance must be reduced to a minimum and supervision to the smallest possible staff by utmost ingenuity in planning. Study of special precautions taken on the Betsy Head swimming pool may yield some interesting hints.

But above all, cultural centers should be compensatory extensions of our shrinking homes rather than monuments. The writer was once conducted through a community center donated at the cost of \$8,000,000 by a benevolent industrialist. It included a slightly reduced-scale Paramount theater, a gleaming indoor pool, a reading room which would put the Morgan library to shame. It was resplendent and complete in every respect save one: there was not a single person in there out of the many thousands of working people for whom it was donated.

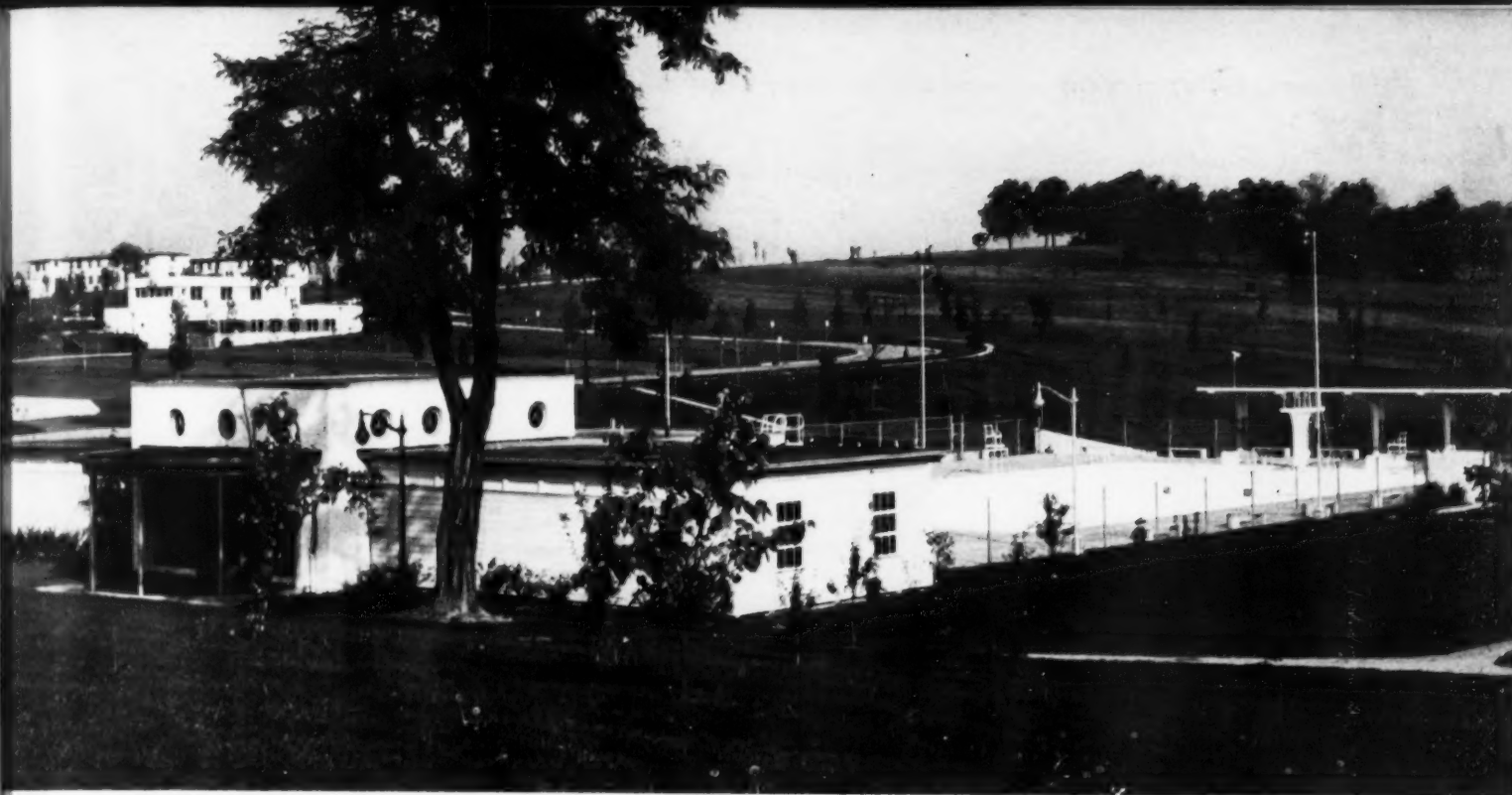
Buildings should incite activity: play and holler; hammering and sawing; painting and modeling (though not in the same room at the same time). By all means, they should include facilities for conviviality. Materials and equipment should not shrink from human touch. There should be unlimited air, light and built-in cheer; culture should be enjoyed, not endured.

Soon, perhaps, cultural centers will become normal to every community, and in the process more or less standardized, much like schools. When that happens, let us hope that they will remain lusty and human and that in the effort to improve our intellects it will be remembered that democracies, also, can gain great strength through joy.



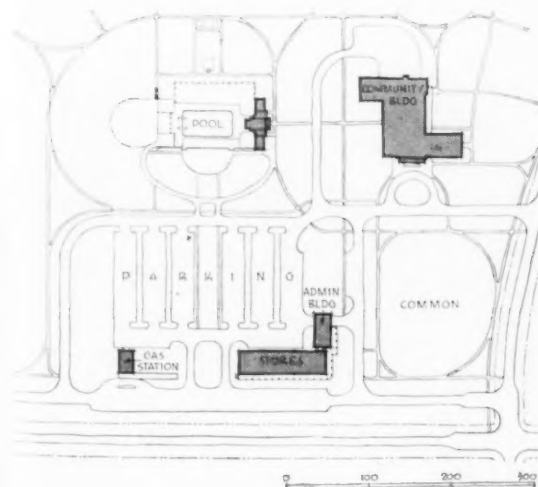
"... SPECIAL PURPOSE FACILITIES ..."—New York's new Bronx Zoo, designed by Harry Sweeney, almost cages the populace to view animals roaming naturally. Above, African plains animals consort realistically. Below, The Tortoise and The Hare in the Children's Zoo, which adults can enter only in children's company. Here a city child can handle common animals, study them at first hand





CULTURE, RECREATION AND COMMERCE HAND-IN-HAND

COMMUNITY CENTER, GREENHILLS, CINCINNATI, O. ROLAND A. WANK, G. FRANK CORDNER, PRINCIPAL ARCHITECTS; JUSTIN A. HARTZOG, WM. A. STRONG, TOWN PLANNERS. Built a few years ago by the Suburban Resettlement Administration (now FSA), this center includes reasonably complete community facilities even though decision to do so curtailed the number of houses which could be erected initially. It was a conscious decision based on belief that such provisions make a strong community out of conglomerate houses; that the more complete are central facilities, the stronger is each and the more satisfactory will be municipal growth. Grouped facilities reduce first cost by eliminating duplicate approaches, parking areas, etc.; save on structure by consolidating plan elements (back of pool shelter is outdoor stage; center parking island is farm market); provide an economically operable, mutually supporting, active center.



COMMUNITY BUILDING, primarily an elementary school . . .



. . . houses library, adult classes, religious services, clubs, parties



STORES, OFFICES adjoin; arcade for comfortable window shopping

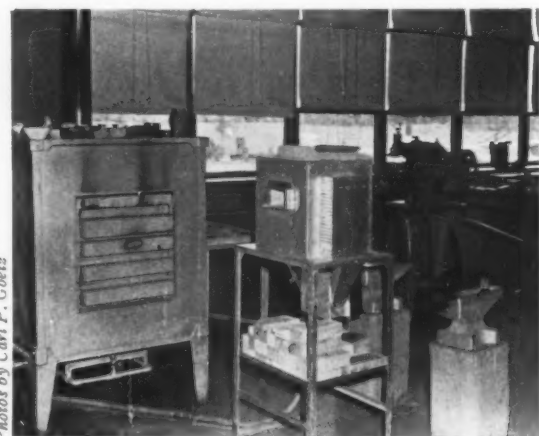
Center includes: auto shop; co-op stores; promenade and dining terrace; parking spaces; farmers' market; public toilets; management headquarters; municipal units; health center; pool; theater; playgrounds and picnic area



AUDITORIUM-GYMNASIUM—90 adults 3 nights a week



LIBRARY—300 adults 3 nights, 3 afternoons a week



Photos by Carl P. Goetz

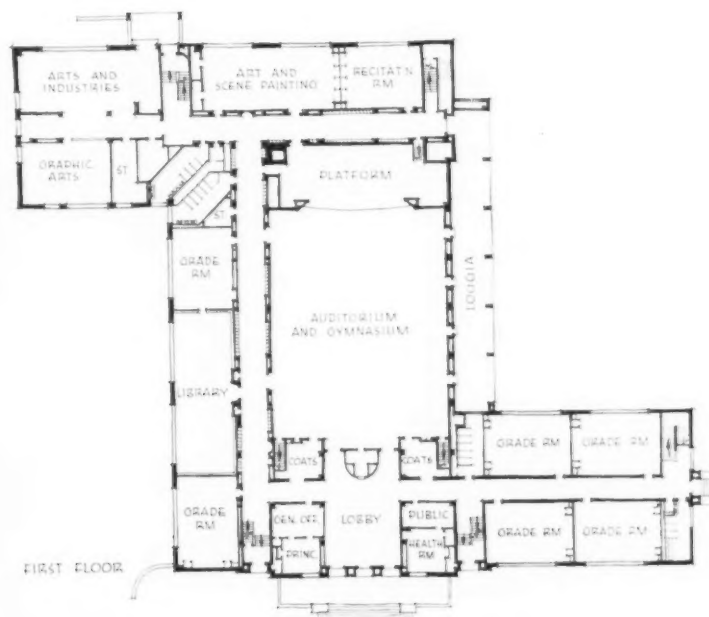
INDUSTRIAL ARTS—55 adults 2 nights a week

The Community Building proper is used several ways. The school has 755 students; each room is used every period. Use of special rooms ranges from 75 commercial arts pupils per day to over 400 in cafeteria-social room. Adult classes have 378 enrollees, use parts of the building from 1 to 5 nights a week. Approximately 1,100 persons have membership in organizations which use the building from 2 to 5 nights and Sunday mornings.

The building is of masonry, concrete and steel. Lighting is direct; heating, low-pressure steam.



SECOND FLOOR



FIRST FLOOR



GROUND FLOOR

DESIGNING THE COMMUNITY BUILDING

By E. B. VAN KEUREN, AIA who has designed many such buildings in and around Birmingham, Ala. Credit is also due ROY S. MARSHALL, Superintendent, Birmingham Park and Recreation Board

THE BEST-PLANNED community house reflects the needs of the immediate area served, rather than a long-range "county-wide" program. Attitudes of three agencies must be considered: 1, the community, 2, local operating agencies; 3, the government.

It is certainly preferable that a building of this kind be located in a residential neighborhood, as convenient as the corner grocery store. We prefer secondary streets. For a community building for neighborhood use, it isn't necessary to study entrances and exits in relation to parking. The average community house should have at least two acres of ground and, if possible, be set back from the street 150 ft. Well-planned driveways can be arranged for parking quite a few cars.

Size and Plan Organization

We find a small building more workable than a large building; smallness seems to inspire a sense of possession among users.

As a rule, in our plans the gymnasium-auditorium unit forms a central mass, with secondary masses on both ends. This gives us a good sound barrier, to block off noise from adjacent houses.

Before space is allotted for activities we survey the community. We either interview representative citizens or try out certain activities. A community building for a neighborhood of low-income families, working in mills and factories, is quite different from a building for white-collar families. In the first case, we would not attempt to provide a hobby shop; in the second, we would. Also, the neighborhood controls amount of space and kind of facilities in the auditorium-gymnasium. Seldom are lower-income groups interested in amateur dramatics; but for others you need a larger stage and auditorium, more extensive dressing rooms, property rooms, and a small workshop for producing scenery. This reasoning might be applied to all activities, always keeping in mind that the object of a community building is to encourage all residents to

take part in some activity. A community does a better job when it puts on a community "sing" than when it hires a trained chorus.

Clubrooms and assembly-gymnasium are grouped so each may be used independently of the remainder of the building; construction is such that noises from one group cannot interfere with activity of another.

Assembly-hall-gymnasium: A multi-purpose room, easily accessible from a corridor and convenient to a storage room, has proven the most practicable solution. We make our assembly halls long enough for amateur basketball. If the neighborhood is interested in athletics, we make the hall wide enough to install two cross courts for *Newcombe* and have two games going at the same time. As a rule this produces an assembly hall ample for the average neighborhood. We put the stage on a side of the hall, with two small dressing rooms. We try to arrange exits to communicate directly with other rooms which may be used as additional dressing rooms. Locker rooms need not be large, and those for boys and girls should be reached by separate corridors, to eliminate cross traffic.

Toilets and showers. Toilets should be provided at several points; one for women is next the kitchen, connected with a small dressing room. Adjacent to this, and accessible from the public corridor, is a women's toilet. Men's toilet is usually on the opposite side of the auditorium. Toilets and showers for the gymnasium are generally at the rear of the stage.

Other community-use areas: We find that the average community activity (aside from "sings," amateur dramatics, basketball) is carried on by groups of from 15 to 25 people. In our plans are clubrooms, large enough to seat 50 or 60 persons and a speaker or leader, which are also suitable for recreational activities for groups of 15 to 25 people.

Craft rooms are equipped with lockers for materials and supplies.

Kitchen. Our average community

building requires a small kitchen, generally connected to one clubroom, with an outside door and a door to a corridor, and a location convenient to the auditorium-gymnasium.

Public spaces. We provide at least two entrance lobbies to assembly halls. Because our winters are mild, people move out quickly, so we can restrict lobby size more than can be done in the North, in order to keep traffic flowing smoothly through the lobby, not to create a reservoir where people stop and talk. As a rule, we provide open terraces or covered porches for the latter purpose. Entrances and exits each serve several parts of the building.

Educational facilities: It is our idea that nursery school and educational facilities, aside from craft rooms, do not belong in the average community building. However, there is some justification for including nursery schools in neighborhoods where both mothers and fathers work.

Administrative offices: We believe that these should be in the background; we allow them a minimum of space because we feel that control is best effected without apparent supervision. In many cases we provide no formal "offices," but have only a small room and storeroom.

Construction

From the standpoint of economy, both in first cost and upkeep, we recommend that the assembly-hall-gymnasium, locker rooms, stage, and toilets have masonry walls. Exterior and interior finishes have to withstand the ravages of youth. For instance, we have found salt-glazed tile or brick, for toilets, showers, necessary even in buildings for better neighborhoods. In less expensive buildings we leave interior walls plain brick and finish with enamel. We have found that floor surfaces, doors, hardware, gates, etc., have to be especially selected for durability and low maintenance; that it is an economy to use the most durable materials regardless of first cost.

Precise data will be found in the *Time-Saver Standard* on page 91.

USO

CLUB HOUSES ARE PLANNED TO PROVIDE NO

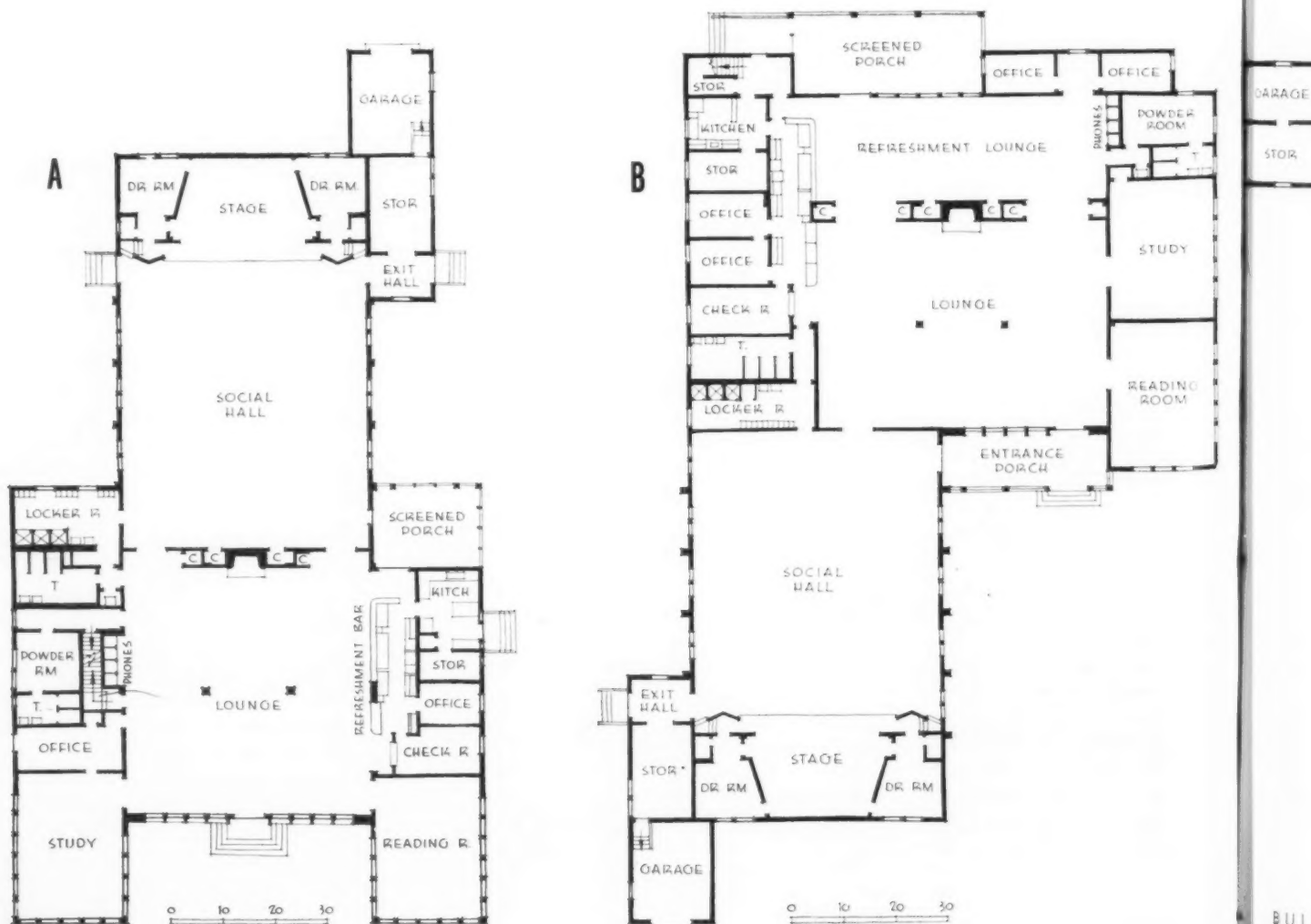
ELY JACQUES KAHN, FAIA, and ROBERT ALLEN JACOBS, AIA, prepared three basic schemes for United Service Organizations club houses. Into their design went much research and accumulated experience. Now drawings have been turned over to the Public Works Administration for execution. Exactly how the proposed 360 club houses are to be built has not yet been determined. It is hoped that the sound planning already accomplished will be fully utilized in fitting these schemes to local requirements, whether this be done directly under PWA or in local designers' offices.

THE USO CLUB HOUSES are a direct reflection of demands to complement work now being done by the Federal Government for the needs of the men in service. The United Service Organizations, in the first instance, is a grouping of the social agencies—Young Men's Christian Association, National Catholic Community Service, Salvation Army, Young Women's Christian Association, Jewish Welfare Board, and National Travelers Aid Association—that in the last war worked independently to serve men in the ranks.

The USO as a combined unit is to run club houses in communities adjacent to camps—in no instances within camp or fort areas. More than a hundred rented buildings and temporary quarters are already in operation under the USO program. New buildings are to be erected by the Government; all are being directed by USO staffs.

The plan problem is one of providing facilities for men on leave. When they are off duty, it is evident that the men will want a place to go, where they are free to enjoy hours of relaxation, meet their families and, particularly, to be clear of army or navy restrictions.

A uniform is the entrance requirement. The objective is to give the men who choose to use the buildings such comforts as are possible within the budgets determined. Sites are within town areas, easy of access and convenient to transportation; facilities will, obviously, be of different sizes, have varying grades and orientations. Three basic plans known as A, B, and C, have been prepared for the new buildings. After close study these seem to cover requirements noted to date. It may be wise to remember that these very plans must be revamped where site conditions, climate,



DE NON-MILITARY RECREATION FOR TRAINEES

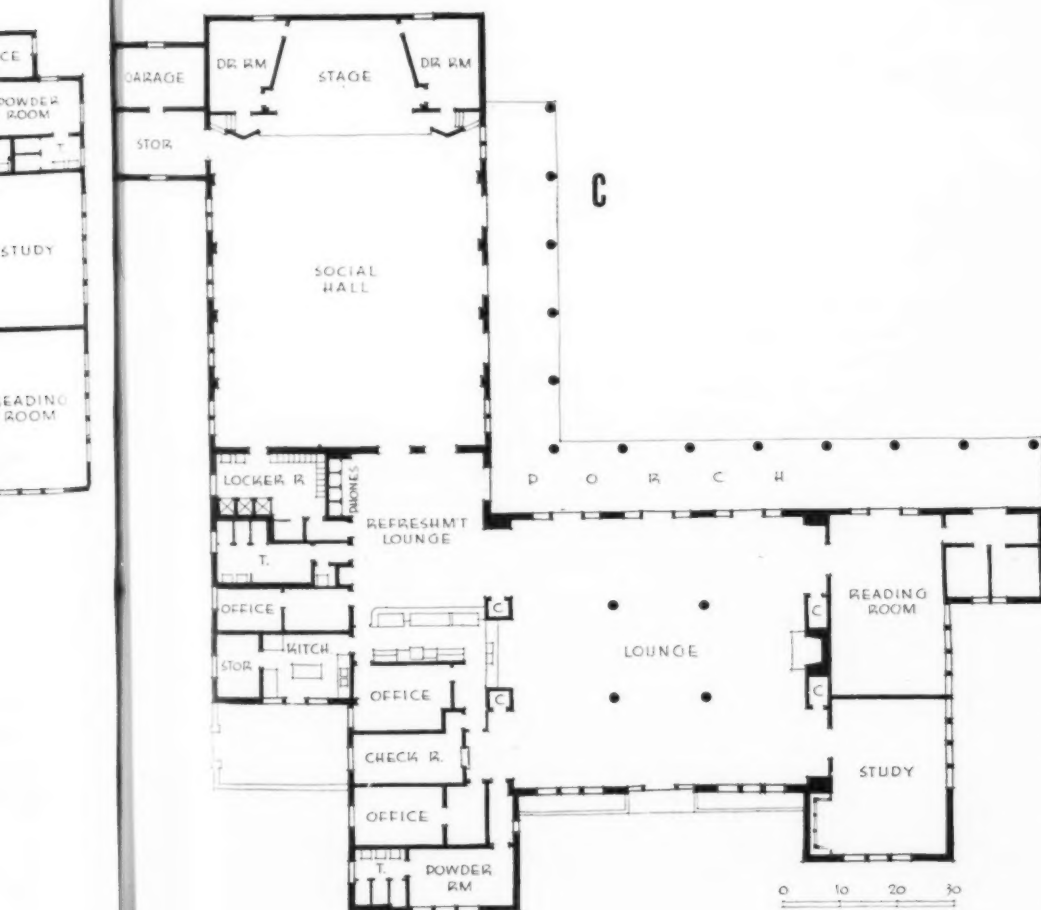
By ELY JACQUES KAHN, FAIA

choice of materials or varying costs demand variations. It is further possible that the basic scheme may be maintained in plan, but the type of construction change substantially; for instance, in locations far South or far North. This would be reflected as well in types of heating or ventilating, depending on locations. Availability of natural gas, coal or oil will determine, in each specific area, the logical fuel base. Soil tests will decide whether boiler rooms be above ground or sunk in basements.

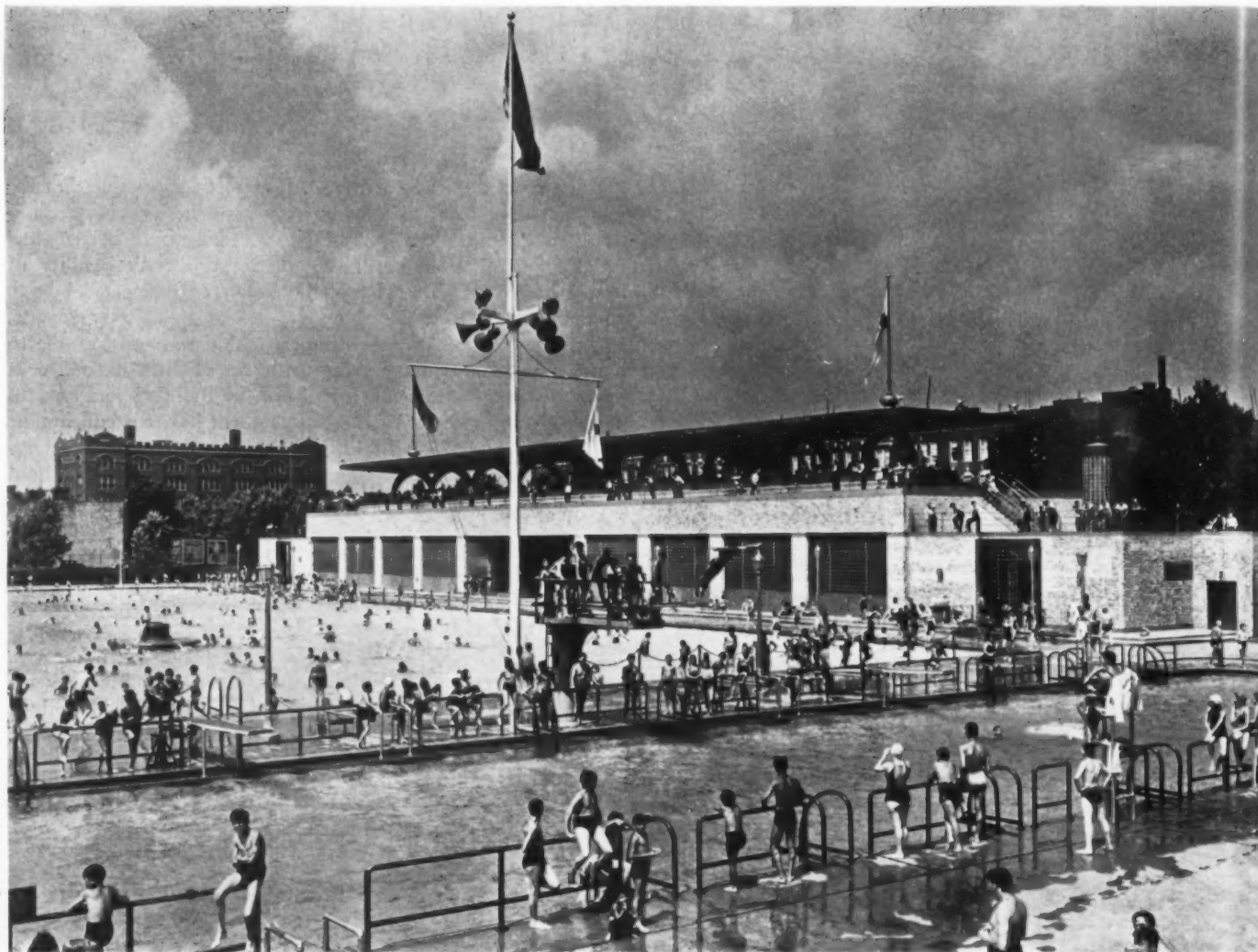
The plans themselves indicate the general requirements. Men want to be able to read, write, play games and, on occasion, have group activities such as dances, concerts or lectures. The lounge proper is the center of life in the building and next to it are toilets, phones, showers, offices, check rooms, refreshment bar, a small lounge where families can meet, and a study room or library. In these rooms, special religious services may be held when desired. Closets adjoining these rooms hold material necessary for chaplains of different faiths.

The problem is simply one of providing a building that is not difficult to manage with a small staff, enabling men to enjoy the privacy that they want in a relatively small building, in no case attempting to serve more than 400 at peak time. Where large troop concentrations cause a need for many USO clubs, they will be distributed among convenient locations in the area.

It is not expected that the club buildings will be large or serve big audiences. Where specific requirements, however, demand major variations, the basic elements can be increased in size and, possibly, in certain locations, much larger buildings may be necessary. These three typical plans, however, indicate the facilities needed.

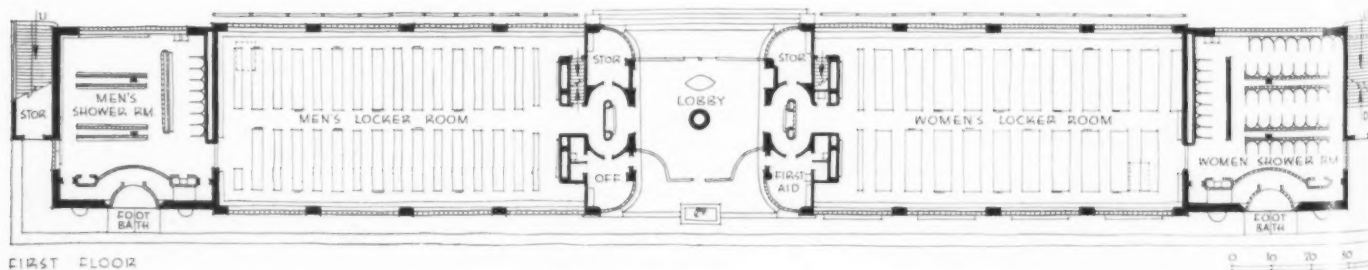


SCHEMES A, B and C illustrate progressive steps in design. A was evolved first, and is intended for the typical narrow urban or suburban lot. B is a revision for general use. C is a variant for a specific Texas site. Elements in all three are identical. Salient features: *Control* is located at the refreshment bar from which, in all three, any activity in buildings can be supervised. *Social hall*, normally furnished as lounge, can be set up as auditorium seating approximately 400, or as ballroom; seats are stored under stage. If service men wish, sleeping accommodations can be furnished here; cots for 120 are stored in adjacent room. Stage and dressing rooms are available for clubs, card games, etc. *Social hall* can be closed up when not in use. *Entrance*, particularly in B, is set back to segregate club activity from routine life of municipality. *Studies* and *reading rooms* are for quiet games, relaxation, parent-son meetings, letter-writing. *Offices* are planned for interviews on personal problems. *Service quarters* for participating social agencies may be needed (if convenient lodgings, etc., are not available.) These may be added at either side of A, lower left and top of B, right of C, with access through existing corridors. *Construction* is based on 4-foot module so plywood can be used for interior and exterior. C illustrates design for hollow tile, a locally available material suited to hot climate. This plan is oriented for prevailing breeze from upper right.

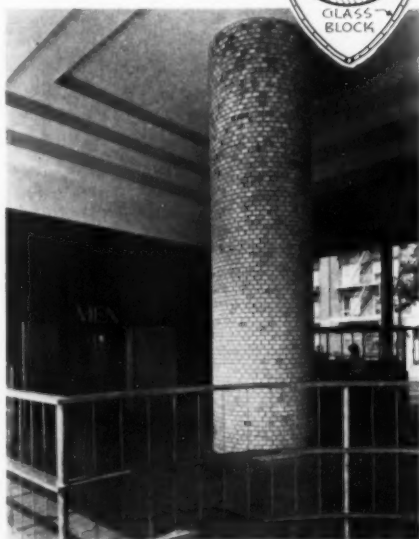
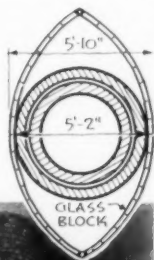


CITY PLAY CENTER FOR ALL-YEAR USE

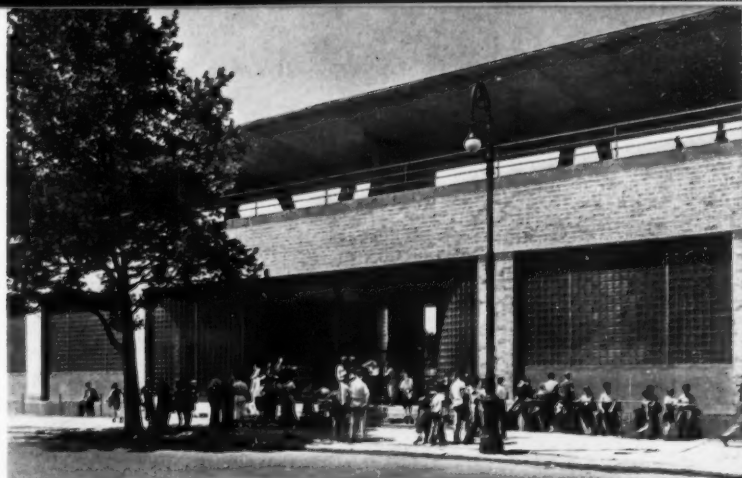
BETSY HEAD PLAY CENTER, BROOKLYN, N. Y. JOHN MATTHEWS HATTON, ARCHITECT; E. A. SEARS, CONSULTING ENGR.; S. J. KESSLER, STRUCT. ENGR. Part of the program of New York's Park Department, this building is primarily a pair of locker rooms which serve a swimming pool in a Brooklyn park. But the design problem was more complex than is implied in such a simple statement. The structure had to be adaptable to a multiplicity of uses: hence the locker rooms can become basketball courts in winter; the roof is a stadium for viewing water pageants held in the pool. Circulation and supervision of 5,500 boys and girls past the ticket office, through locker rooms, showers, toilets, sanitary baths and into the pool enclosure, was perhaps the most difficult plan requirement. Above all, the building is intended for enjoyable use.



CHIMNEY rises through lobby's center, becomes lighting fixture on stadium deck; vent shafts visible at either end are similarly treated. Lights are enclosed in glass block



STREET ENTRANCE



STADIUM ENTRANCE



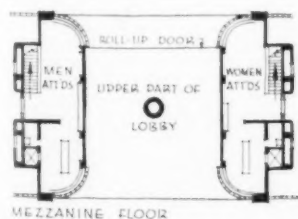
SHOWER ROOM ENTRANCE



POOL FACADE



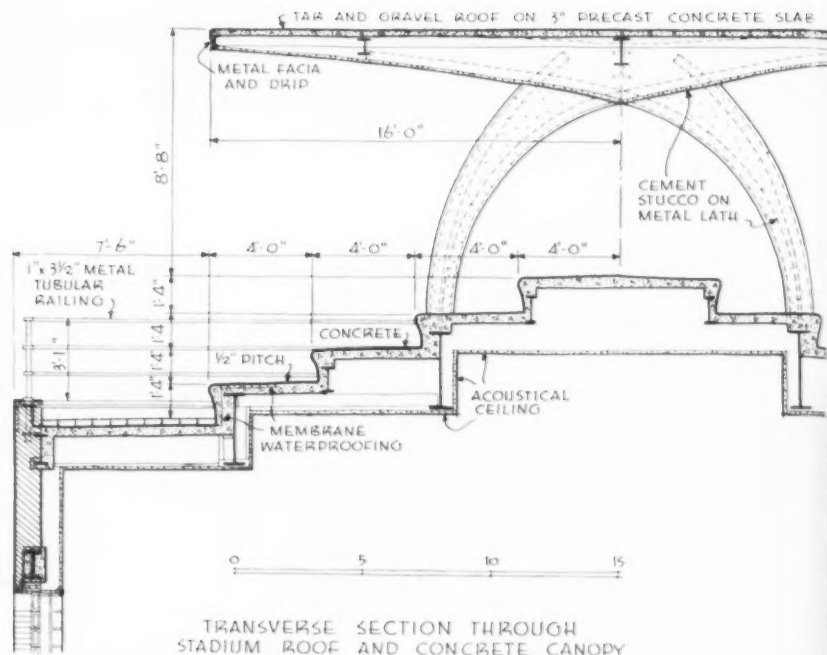
A fundamental consideration was the great amount of equipment which had to be incorporated. Complex piping, ducts, fixtures, key control desk, etc., might have destroyed the simplicity of the plan had they been less efficiently organized. Another consideration was design and selection of materials for exposed surfaces. In this particular location, public property is fair game for vandalism: walls, floors, even lockers, had to be difficult to scribble on; no piece of removable metal was permissible.





Photos by Gattischo

FOOT BATH



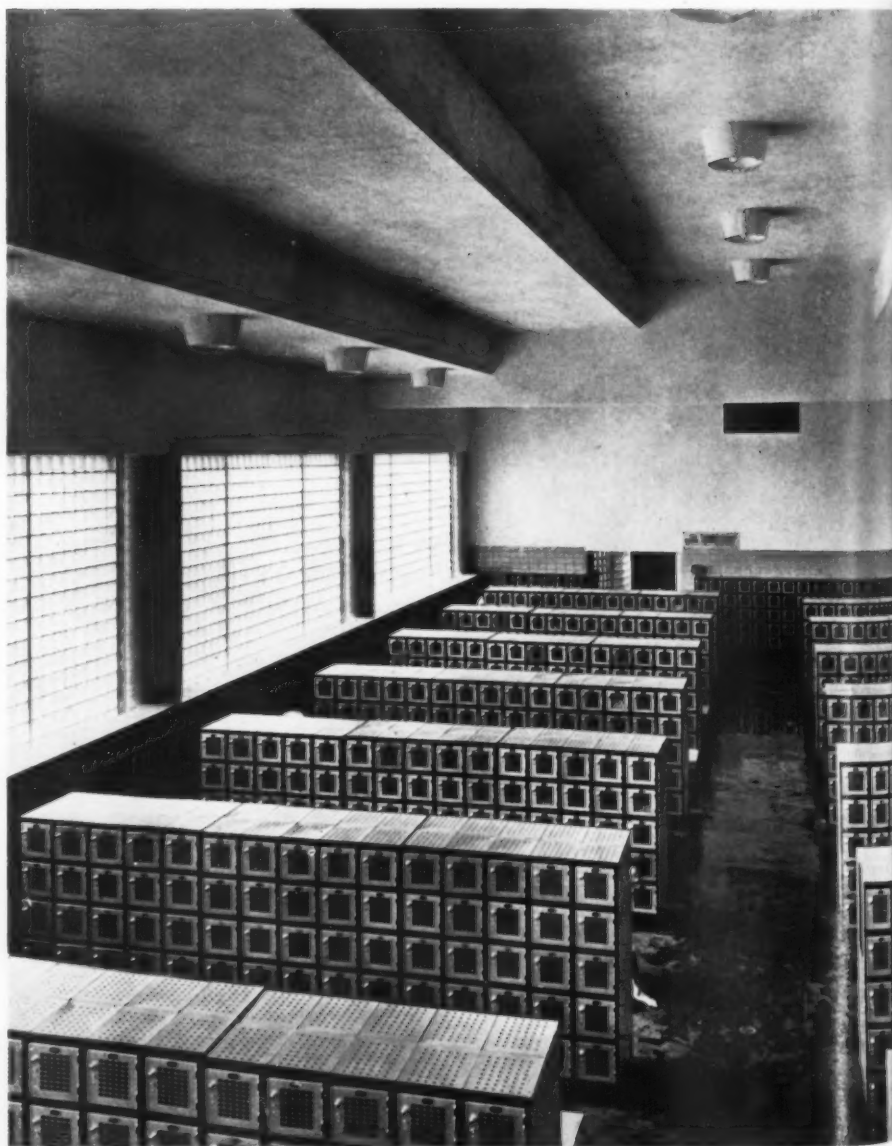
TRANSVERSE SECTION THROUGH STADIUM ROOF AND CONCRETE CANOPY

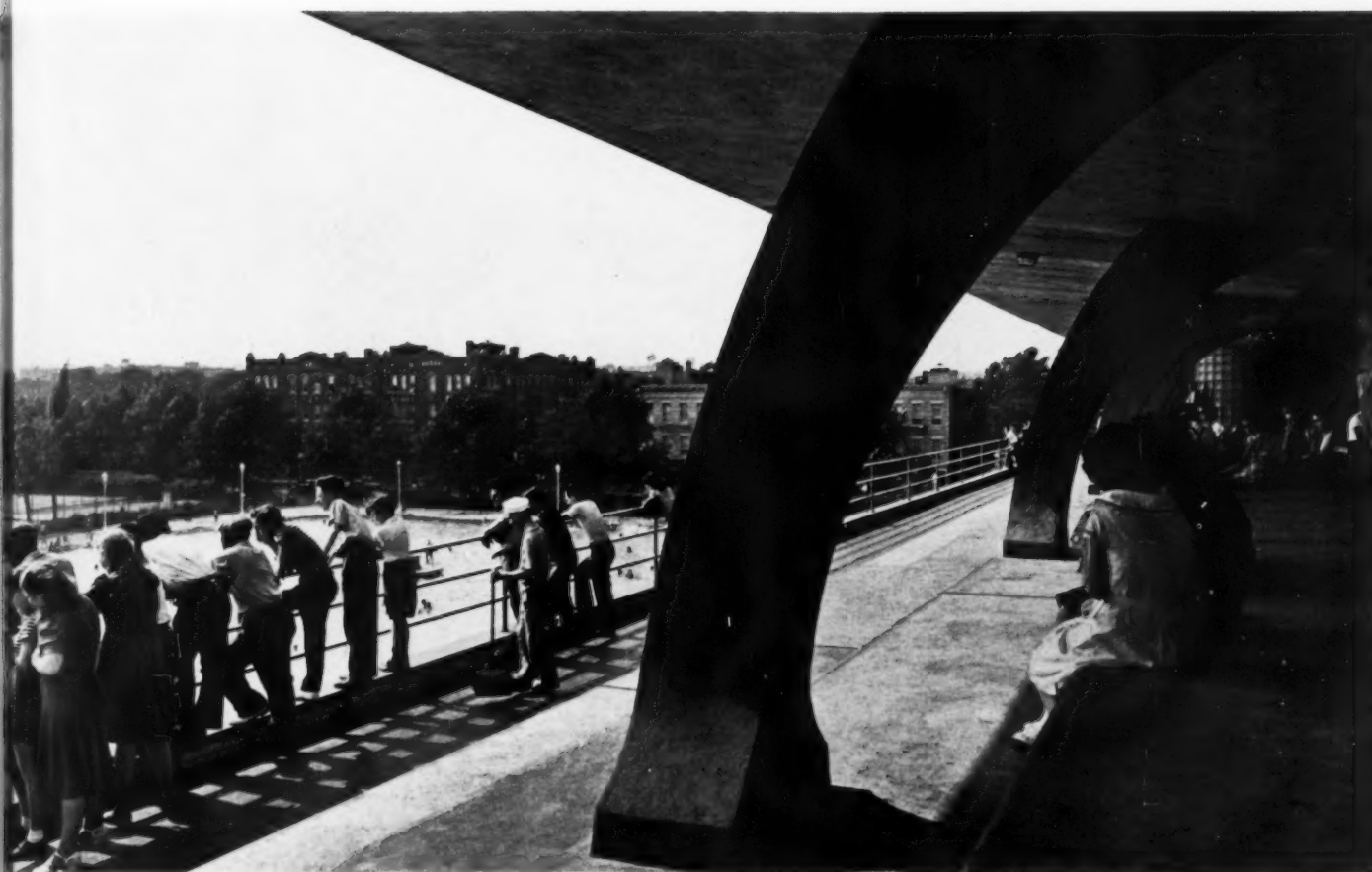
DESIGN AND CONSTRUCTION were closely integrated because the engineers and architect cooperated effectively. Perhaps the most striking result is the locker-room-ceiling-stadium-roof detail, which together with its canopy usably recaptures most of the park area occupied by the building. Normal procedure would have been to roof the locker rooms with transverse steel, and build the stadium deck above. But the structural engineer, besides having the "feel" of the architect's conception, was both practical and inventive. Four longitudinal members support the roof; purlins and smaller longitudinal members support intermediate steps.

Waterproofing the roof would have been difficult except for the engineer's design and supervision. Integral waterproofing was used for the most part, and the mix was scientifically proportioned. Inspection at the point of mix, in transit, and during placement, plus frequent tests, for a time threatened the contractor's sanity; but he recovered quickly when he found that such fussiness actually saved money.

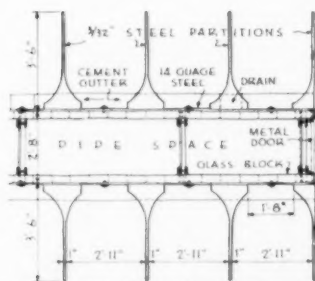
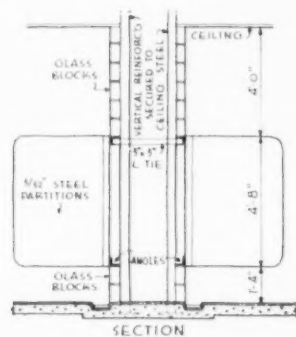
The stepped locker room ceiling has another advantage in that its broken surface reflects noise less easily than would a flat expanse. Acoustic plaster was applied; and no matter how loudly children yell, the ceiling won't yell back. Says Mr. Hatton: "The order which this effected was amazing." Apparently children enjoy the building none the less for the architectural trick played on them.

When locker rooms are used for games, steel lockers are removed to the basement via sidewalk lifts. Floors are concrete with non-slip waterproof topping. Walls are brick, with glazed terra cotta interior finish. Partitions are terra cotta, glazed terra cotta and glass brick. Heating is two-pipe vacuum steam, with special units in showers. Cost, exclusive of land, landscaping, or furnishing: \$299,157. Cubage: 482,896 cu. ft.





ROOF-DECK STADIUM



PLAN - WOMEN'S SHOWER STALLS

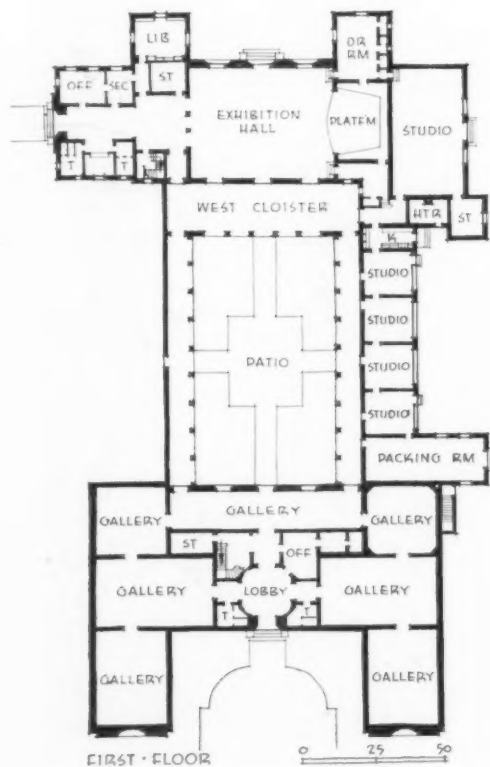
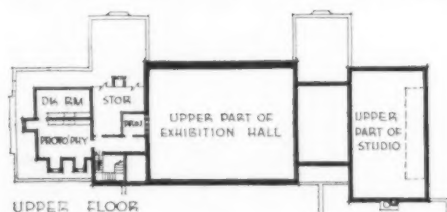
SHOWER fixtures in both men's and women's shower rooms are mounted on free-standing, glass-block-enclosed pipe chases with end access doors. This minimizes danger of dirt accumulation, facilitates repairs. Floors are unobstructed for easy hosing down. Special stall detail for women's showers is also used for men's and women's toilet enclosures.



Photos by Gottscho

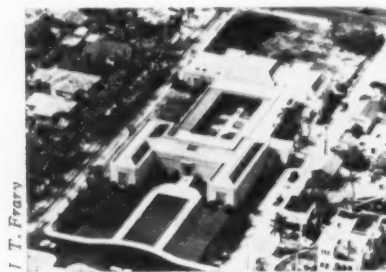


MUSEUM AND ART SCHOOL DESIGNED TOGETHER



NORTON GALLERY AND SCHOOL OF ART, WEST PALM BEACH, FLA. WYETH & KING, ARCHITECTS; PAUL MANSHIP, SCULPTOR; J. D. STURROCK, LANDSCAPE ARCHITECT. This project, presented by Mr. and Mr. Ralph H. Norton to The Palm Beach Art League, includes a museum; school of art; a 350-seat auditorium for school use, dramatic and musical presentations, moving pictures, and special exhibitions; and facilities for a local camera club—all grouped about a central patio which can also be used for exhibitions. Although completed in February 1941, additions have already been started: two wings for traveling exhibits are being erected to the left of the patio.

The two principal elements—gallery and school—are so separated in plan that either can be used independently of the other. In the school are one large and four small studios. The former is intended for class instruction and large projects. The building is completely air conditioned from a central plant in the basement. Construction is of hollow tile; exterior surfaces are stucco, trimmed with Alabama Rockwood stone. Ceilings of most galleries consist of 2-foot squares of wire glass supported by a steel grid. Above this are placed lighting reflectors; skylights are over the glazed ceilings. Thus natural and artificial light are easily coordinated.



I. T. Frary



PAUL MANSHIP'S sculpture decorates the gallery front in three bas-reliefs and white bronze sculptures of Actaeon and Diana



PATIO connects the units, may serve for exhibits, outdoor classes, etc.



CORRIDOR GALLERY opens into patio



INTERIOR GALLERIES have walls covered with monk's cloth, indirect lights between skylight and glass ceiling



Photos by Gottsche

AUDITORIUM, for drama, music and movies, has pine-sheathed walls

COMMUNITY BUILDING PLANNING

ARCHITECTURAL RECORD
TIME-SAVER
STANDARDS

SEPTEMBER 1941

Information on this sheet was prepared from data collected by Ronald Allwork. Sources include F. Elwood Allen, community building consultant, National Recreation Association; John Matthews Hatton, Architect; E. B. Van Keuren, AIA; New York City Park Dept.

General. A community building must fit into the life of those for whom it is designed. Therefore no set pattern can be established. Selection of facilities to be included and arrangement of units has to conform to local conditions. A site in a residential neighborhood, on a secondary street if possible, is usually desirable. Trends of community growth, and traffic have to be considered.

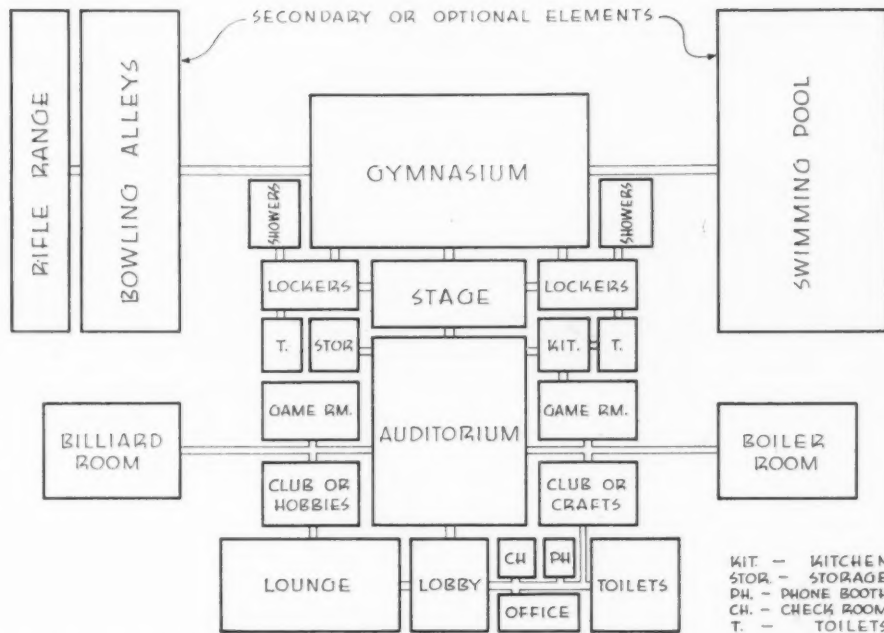
The building may be intended for indoor use only, or as a "field house" for outdoor play, or as a combination of both. Elements shown in diagram at right are those most commonly incorporated, in the experience of the National Recreation Association. Local habits, availability of funds, etc., dictate requirements for specific cases.

Since funds are always limited, low costs, both initial and upkeep, are a prime consideration. In planning, this premise demands that rooms be designed for multiple use, that circulation be simple and direct. In construction and equipment, durability, permanence and easy maintenance are important factors. This may require that fairly expensive materials be used—a practice which, though it may increase first cost, can result in maintenance economies.

TYPES OF SPACES

Gymnasium and auditorium: The Nat'l. Rec. Ass'n. recommends that these be separate rooms to avoid pre-emption of space by one activity at another's expense. In practice, combination of the two is often the only practicable solution, financially. Gymnasium should be large enough for the game requiring the greatest area, usually basketball. For organized teams, a floor 50 by 90 ft., and a 20-ft. ceiling, are desirable. Since the object is to interest members of the community in active participation, a smaller space, still ample for "amateur" groups, is often provided. A room 75 by 60 ft. will accommodate a satisfactory amateur basketball court or two or more smaller game courts, sufficient for 30 or 40 active participants at a time, and will seat 400 to 425 people comfortably when used as an auditorium. The Nat'l. Rec. Ass'n. recommends a minimum of 6 sq. ft. per person.

Stage should have sufficient area for amateur productions, even if these do not seem of great importance at first. If space is available, initiative of those who use it can overcome deficiencies in equipment. Absolute minimum depth is 18 ft.; 20 ft. is a preferable minimum, 30 ft. better. Satisfactory proscenium width is 24 ft., with 12 ft. of wing space at either side. The optimum is wing space at least double the proscenium width, half on each side. Stage ceiling should be at least 3 ft. higher than



ORGANIZATION OF ELEMENTS, based on recommendations of the National Recreation Ass'n.

proscenium opening; as much more as the budget permits will facilitate use of stage lights, drops, etc.

Two small dressing rooms, with lavatories, are sufficient if other adjacent rooms can be used when needed. Chair storage space is needed (see drawing over).

Other types of stages than the permanent one outlined may be considered. Occasionally a series of portable units which can be locked together to form runways, exhibit tables, even outdoor counters, prove practical.

Locker rooms need not accommodate full capacity of gymnasium. E. B. Van Keuren finds in Birmingham, Ala., that 30 lockers for girls, 30 for boys, is reasonable; in most cases, he installs only 20 each. He allows 8 sq. ft. per locker. He plans showers in the ratio of 1 to each 5 persons, water closets 1 to 10, for 20-player locker room occupancy.

Game, club and craft rooms are included according to local demands. Most of these can be designed for several purposes. Craft rooms 18 to 20 by 20 to 30 ft., with storage space or lockers for raw materials and work in progress, are ample. Club rooms of about 600 sq. ft. can be used for formal discussion groups seating 50 to 60 persons plus a leader, or by more active groups of 15 to 25 people.

Kitchen may vary from a kitchenette to a well-equipped small kitchen, about 15 by 25 ft. It should be connected to a club room, convenient to the auditorium, and may have its own toilet.

Other recreation units, such as swim-

ming pool, rifle range, etc., are ordinarily eliminated because they are not subject to multiple uses, or are too expensive initially. Local needs govern.

Public toilets should be easily accessible. For the average neighborhood building, 3 or 4 women's water closets, 2 men's closets and 3 urinals are usually sufficient.

Coat room of 100 sq. ft. is usually sufficient; less may be needed.

Public spaces, including lobbies, lounge (if used) and corridors, are best designed for easy circulation. In warm climates, lobbies can be restricted, lounges omitted, and inexpensive outdoor terraces or porches provided for people to congregate and talk. In cooler climates, indoor "visiting" space has to be provided. Trophy case, bulletin board, telephone, cashier's window or table, etc., are included.

Office is preferably unobtrusive. A room of 80 sq. ft., with space for desk, file, chair and possibly a telephone switch board, is ample. There should be a store room of 64 sq. ft. adjacent.

CONSTRUCTION AND FINISH

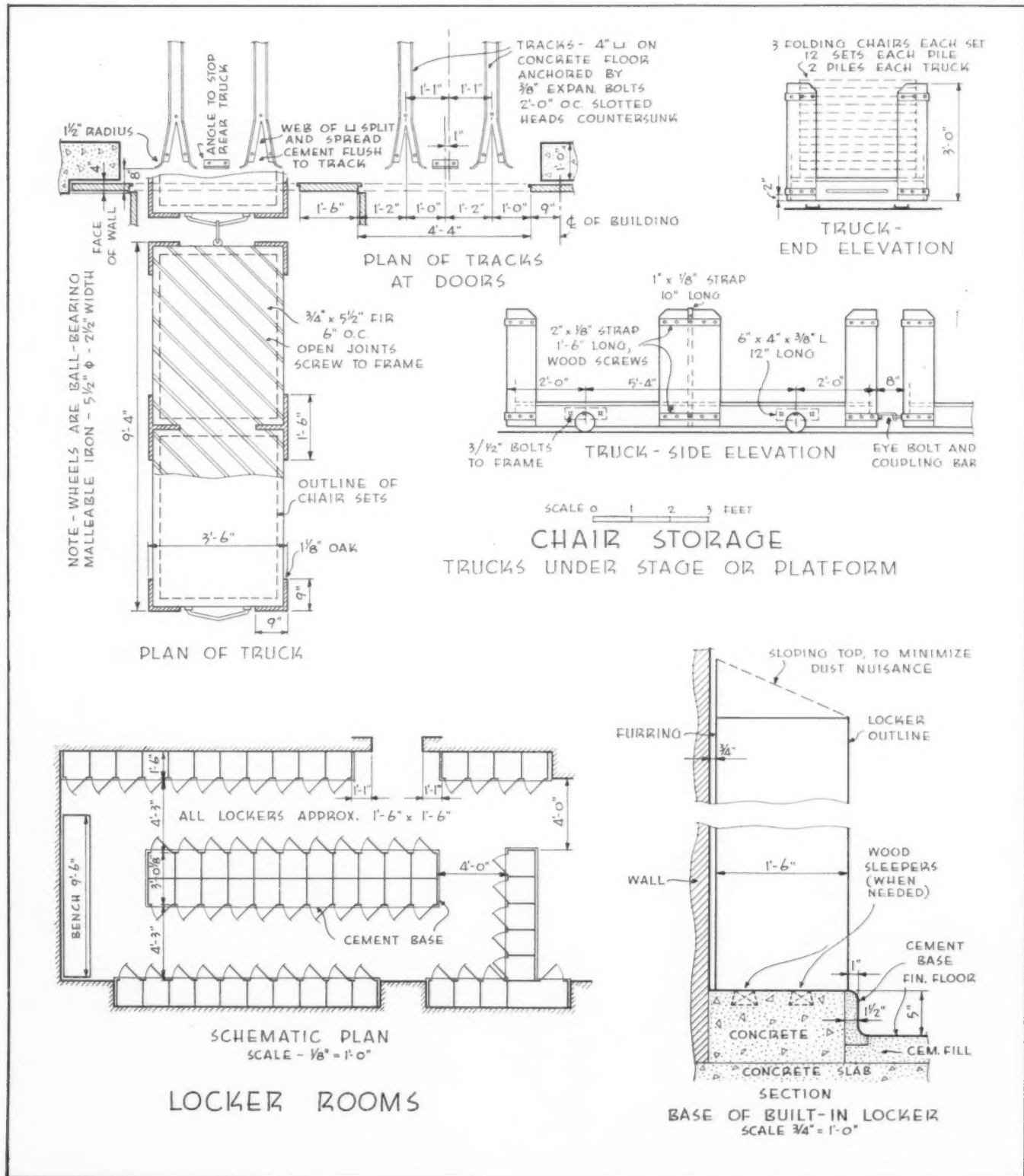
Gymnasium-auditorium in particular, and also other activity rooms, should be arranged and constructed so noise from one does not interfere with another group, or disturb nearby residences. For this and other reasons, Mr. Van Keuren has found impervious washable masonry desirable for gymnasium, auditorium, locker room, stage and toilet walls. Rubbed concrete, salt-glazed tile or brick, etc., are deemed

COMMUNITY BUILDING DETAILS

best for toilets, showers, etc., in order to minimize upkeep. Painted (enameled) brick is also used. Floor finishes, doors, hardware, gates, etc. have to be selected for durability and low maintenance.

Door frames are metal, heavily anchored; doors, flush panel with cast hardware. Window stools are glazed tile or brick; base is metal. Floors of auditorium and gymnasium are hard-

wood. Floor of stage should be soft wood to facilitate scene setting. Elsewhere, non-slip, easily cleaned materials (such as asphalt tile) are satisfactory finishes. Acoustic ceilings are needed.

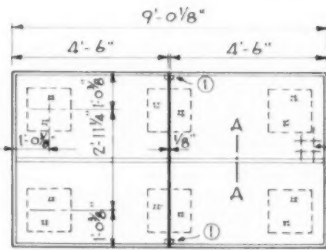


OUTDOOR RECREATION EQUIPMENT

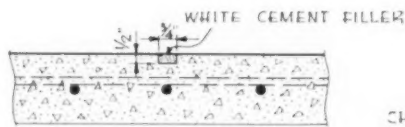
ARCHITECTURAL
TIME-SAVER
STANDARDS

SEPTEMBER 1941

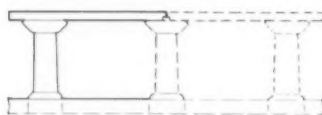
Data on this sheet was selected by Ronald Allwork from standard details prepared by the Department of Parks, New York, N. Y.



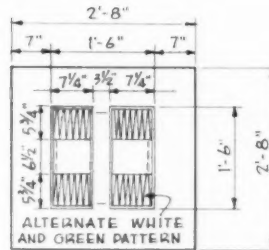
PLAN
TABLE TENNIS
SCALE - $\frac{3}{16}$ " = 1'-0"



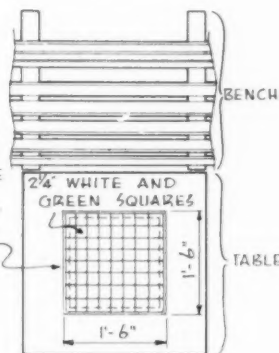
SECTION "A-A"
CEMENT CENTER LINE
SCALE - $1\frac{1}{2}$ " = 1'-0"



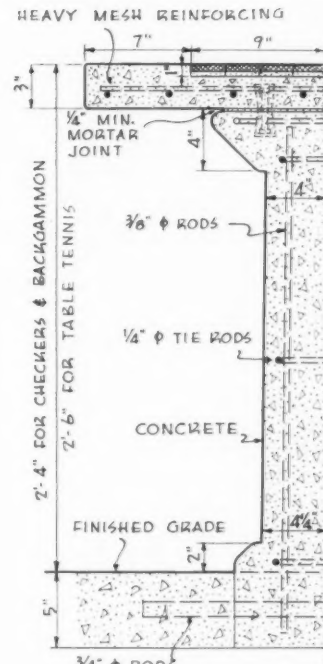
SIDE ELEVATION
GAME TABLE
SCALE - $\frac{3}{16}$ " = 1'-0"
NOTE - DIFFERENT TABLES ARE
MULTIPLES OF TYPICAL LEG
SECTION AT RIGHT OF PAGE



PLAN
BACKGAMMON
SCALE - $\frac{3}{8}$ " = 1'-0"

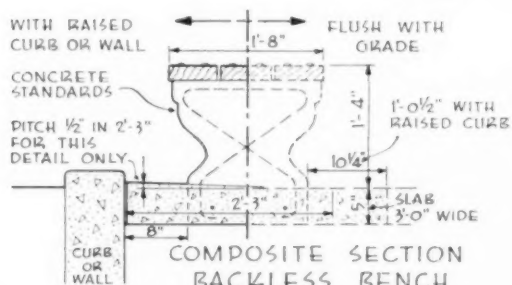


PLAN
CHECKERS
SCALE $\frac{3}{8}$ " = 1'-0"
SHOWING RELATION
OF BENCH TO TABLE

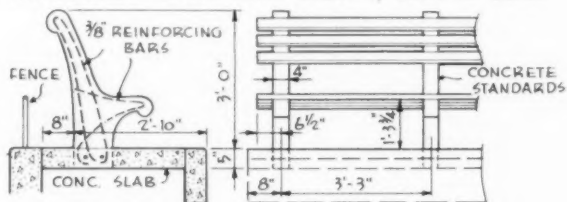


HALF SECTION
TYPICAL TABLE LEG
SCALE - 1" = 1'-0"
NOTE - ONE LEG FOR SINGLE
CHECKER OR BACKGAMMON
TABLES, TWO FOR COMBINATION
OF THESE, SIX FOR TABLE TENNIS

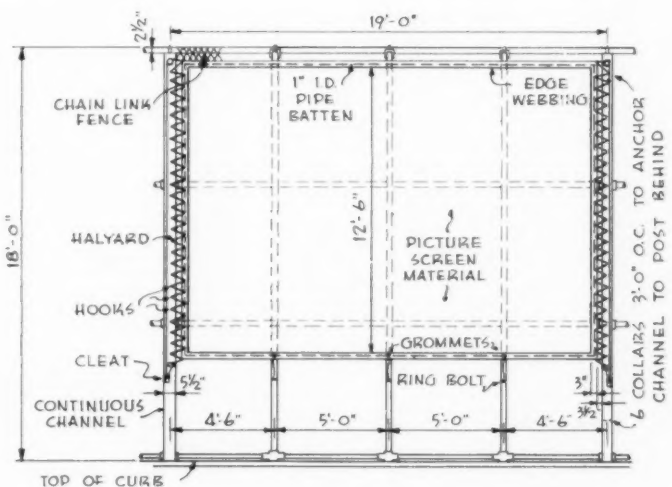
CONCRETE GAME TABLES



COMPOSITE SECTION
BACKLESS BENCH
SCALE - $\frac{1}{2}$ " = 1'-0"
PROVIDE ONE 1" EXPAN. JOINT EVERY 15 UNITS OF BENCH

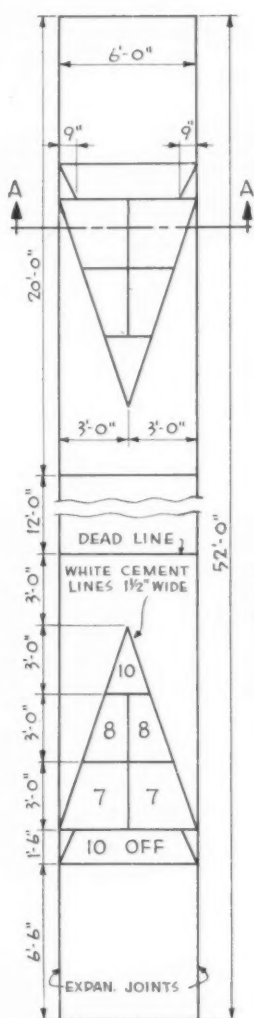


SIDE ELEVATION
FRONT ELEVATION
SCALE - $\frac{1}{4}$ " = 1'-0"
DETAILS - TYPICAL PARK BENCH

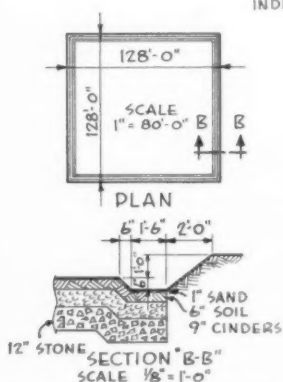


ELEVATION
SCALE - $\frac{1}{8}$ " = 1'-0"
PORTABLE MOTION PICTURE SCREEN

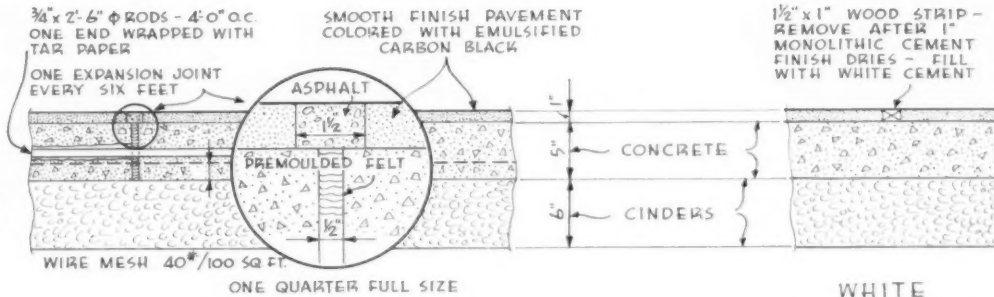
OUTDOOR RECREATION EQUIPMENT



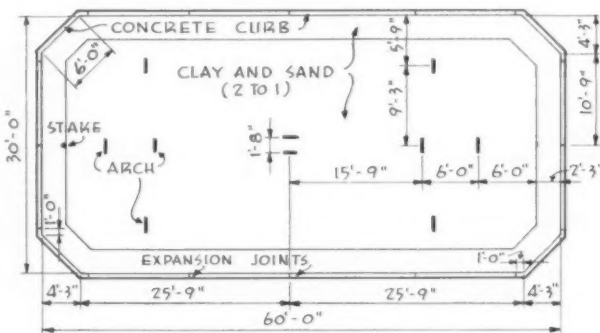
PLAN
SCALE - $\frac{1}{8}'' = 1'-0''$
SHUFFLEBOARD COURT



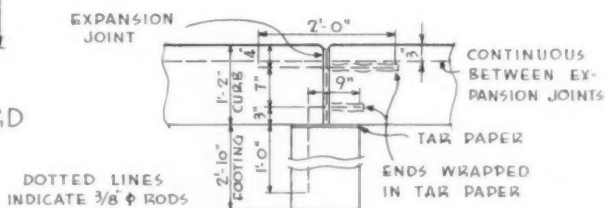
SECTION "B-B"
SCALE $\frac{1}{8}'' = 1'-0''$
BOWLING GREEN



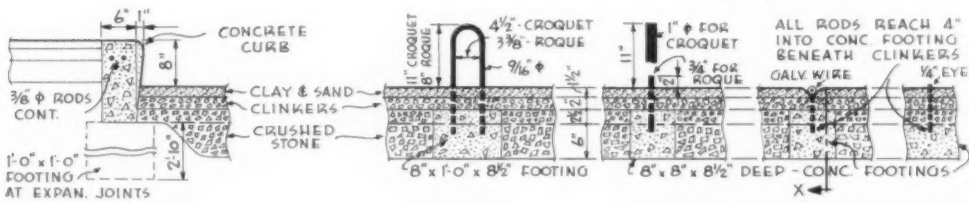
SECTION "A-A"
DETAILS FOR CONCRETE SHUFFLEBOARD COURTS
SCALE - $\frac{3}{4}'' = 1'-0''$



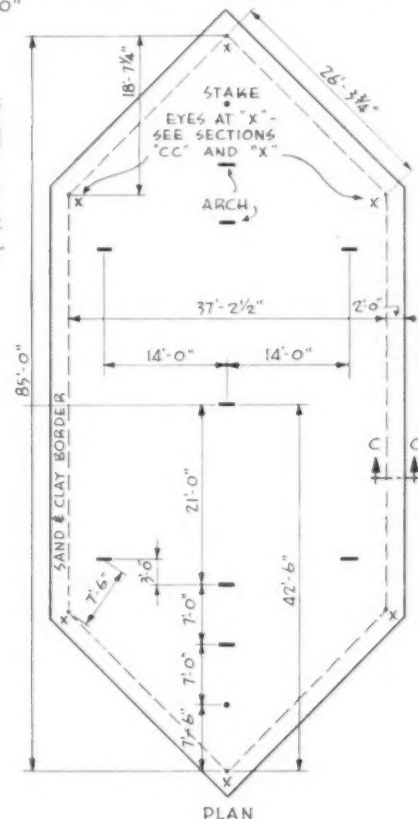
PLAN
ROQUE COURT
SEE DETAILS BELOW



EXPANSION JOINT
IN CURB



DETAIL OF ARCH
STAKE
SECTION "C-C"
SECTION "X"
SCALE OF THESE SIX DETAILS - $\frac{3}{8}'' = 1'-0''$
DETAILS FOR ROQUE AND CROQUET COURTS



PLAN
CROQUET COURT
SEE DETAILS BELOW

Now MODINE Copper CONVECTORS are TAILOR-MADE for the SYSTEM

● No single type of convector can adequately meet the varying needs of several heating systems.

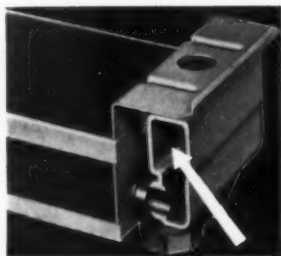
Modine was one of the first to manufacture a special convector for hot water. In 1939 Modine developed the Quiet-Seal Convec-

tor—the successful, modernized equipment for 1-pipe steam.

And *now*—to meet your specific needs—Modine has made another engineering advancement—4 distinct types of copper convectors, each *tailor-made* for a separate system.

FOR HOT WATER SYSTEMS

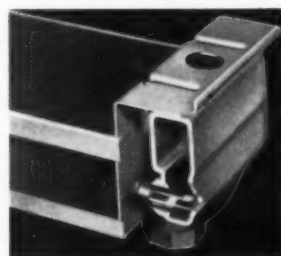
Two Soundly Designed, Accurately Rated Heating Units



Built-In Air Chamber is indicated by arrow

Hifla...for 1-pipe and gravity systems

Large $\frac{3}{8}$ inch O. D. tubes, free of internal ferrules and other restrictions, lower frictional resistance and induce high rate of water-flow. Built-in air chamber eliminates need for accessory air storage equipment.



Turbaflo...for 2-pipe forced systems

A turbulator in each tube breaks up film of cooled water on inside surface of tube; keeps hot water in constant contact with tube. Turbulator design is such that it

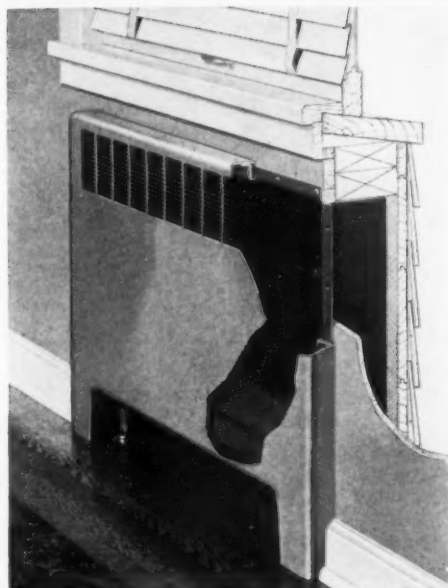
will not trap air in the tubes (which causes air binding with resultant loss in capacity). Also is equipped with the built-in air chamber.

FOR STEAM SYSTEMS

Two Soundly Designed, Accurately Rated Heating Units

STANDARD—for Vapor and Vacuum Steam—proved in thousands of installations. Has the metallic bonding of tubes to fins and heavy steel corner strips distinguishing all Modine heating units.

QUIET-SEAL—for 1-Pipe Steam *exclusively*. Gives all economies without “troubles” of older systems. Built-In Water Seal permits free venting, prevents air binding or water logging. Operates on one-way flow principle.



Projection Style Recessed Enclosure. Fronts may project 2 $\frac{1}{4}$, 4 $\frac{1}{4}$, or 6 inches forward of plaster line. Heating units up to 9 $\frac{1}{4}$ inches deep may be installed in 4-inch stud wall.

... Only MODINE CONVECTORS have ALL these features

New Heating Unit Support Built Into Every Enclosure Cuts Installation Labor Costs

Heating Unit Shipped in Enclosure ... Ready for Piping

Built-In Air Chamber on Hot Water Heating Units Eliminates Accessories

4 Types of Heating Units ... Tailor-Made for Different Systems

Enclosure Front Takes Only 30 Seconds to Attach...without use of tools

Bonderizing—Assures Paint Retention on Enclosures

Enclosure Design Permits Insulation to be Easily Applied “On the Job”

MODINE MANUFACTURING

COMPANY, 1773 RACINE STREET, RACINE, WISCONSIN

modine

Convectors

Get This NEW
32-Page BOOK

Look in your phone book for Modine representative's name—“Where to Buy It” section under Heating Apparatus.



NEWS OF MATERIALS AND EQUIPMENT

New Black Stone Now Available

REPLACING the black marble and black granite formerly imported from Belgium and Sweden, a new stone is announced, the result of research which has been carried on for a number of years. The product is a natural stone said to be processed under controlled conditions of high-temperature and pressure to make it water repellent, mechanically stronger than the natural stone and proof against chemical corrosion, atmospheric or otherwise. The patented treatment imparts a dull black color, said to be permanent as the stone itself, which lends itself to an attractive finish. As the absorption is zero, no parging is required. Recommended for bare courses and all architectural exteriors and interiors. Weight per cu. ft. 150 lbs. Modulus of rupture 2,800 lbs. per sq. in. Ultimate crushing strength 12,000 lbs. General Ceramics Co., Keasbey, N. J.

Coating for Metal Protection

SEARCH FOR substitute materials to solve priority problems has led one manufacturer to conduct tests on a roof coating for the protection of iron sheets, structural steel, metal buildings, bridges, ornamental iron work, black iron sheets, duct work, sheet metal items. These tests are said to prove the product rather highly abrasion-resistant and resistant to acid, alkali and salt. It will protect metal against rusting, mild acid or alkaline air concentrations. Test also indicated high resistance to fracture and weathering. The melting point of the asphalt used in the coating is 220 degrees. Ample supply is claimed. Philip Carey Manufacturing Co., Lockland, Ohio.

Casement Details and Data

THE DRAFTSMAN'S routine detail work should be lightened if he uses casement details which are available from a manufacturer of windows. The details are printed on loose-leaf pages for tracing right into plans. Rol-screen Company, Pella, Ia.



At this observation post of the Research Home of the Institute of Boiler and Radiator Manufacturers, at the University of Illinois, more than 600 readings are taken each day to compile data on temperature and humidity throughout the house and the operating efficiency of boiler and heating system. Other facts to be determined are the difference in cost of heating with an inside and an outside chimney, value of insulation and storm sash. Among the questions to be answered by the investigations at the IBR Research House, built to approximate conditions in a typical dwelling, are: What is the rate of heating in the rooms; what and where are the heat losses; how do various heating systems under identical operating conditions compare; how can improvements be made

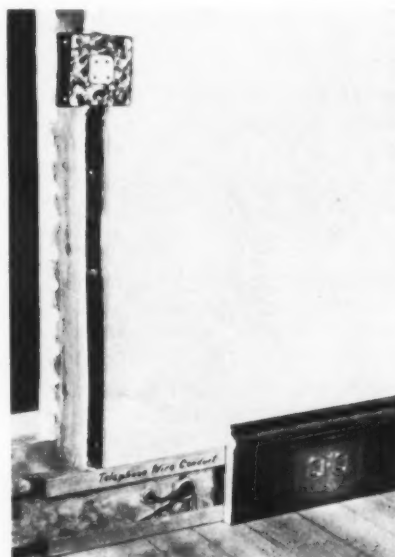


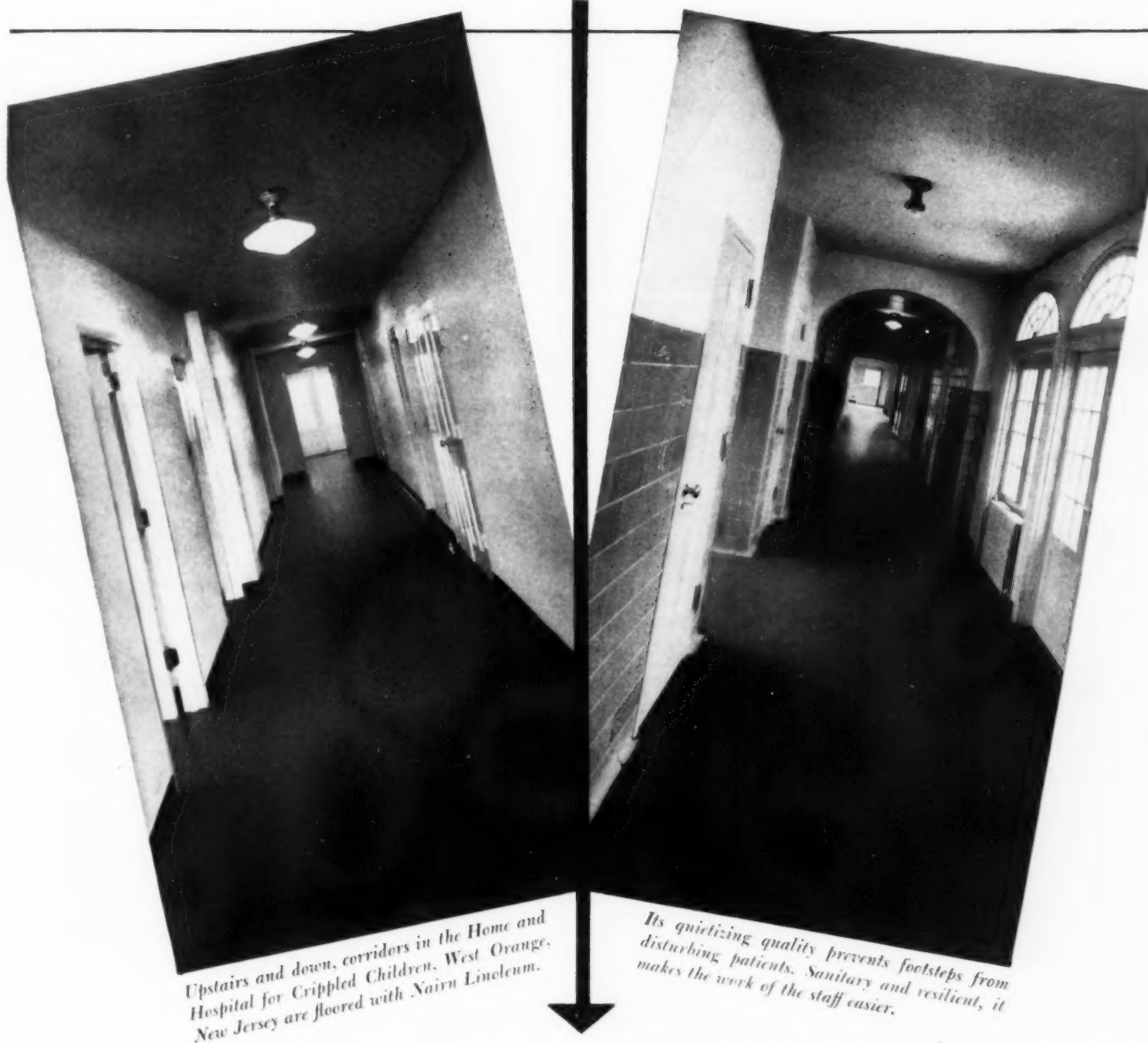
Figure 1

Conduit Base for Wires

CURRENT and telephone wires can be concealed yet accessible through the use of a new conduit base covered by a removable baseboard. All metal base fronts have duplex knockouts on 30-in. centers. The base erects on the job without special tools and comes in types to be erected both under and in front of the plaster line—the latter useful in bringing old properties up to date without tearing apart walls and floors. Base closures can be of wood, steel, linoleum, or of cork, rubber or asphalt tile and the base functions with all popular wall materials. A floating front is designed to prevent separation of base and floor. Charles E. Barnes & Son, 4320-22 Osage Ave., Philadelphia, Pa. (See figure 1.)

(Continued on page 106)

The test of service experience says **"YOU'RE RIGHT"** if you specify
"NAIRN LINOLEUM" FOR ALL HOSPITAL CORRIDORS!



Upstairs and down, corridors in the Home and Hospital for Crippled Children, West Orange, New Jersey are floored with Nairn Linoleum.

Its quietizing quality prevents footsteps from disturbing patients. Sanitary and resilient, it makes the work of the staff easier.

QUIETIZING!

SANITARY!

STANDS HEAVY "TRAFFIC"!

ECONOMICAL!

• Architects everywhere specify Nairn Linoleum for hospitals, because they know it is giving trouble-free service under the heaviest foot traffic in hospital and school corridors!

Moderate in first cost, the only "upkeep" is cleaning and waxing.

Sound-deadening and resilient, Nairn Linoleum hushes the noise of footsteps—and its springy quality reduces foot fatigue.

Hospital sanitary requirements are

fully met by the super-smooth, easy-to-clean surface of Nairn Linoleum floors. No cracks or crevices, either, where dirt and germs can gather.

From every point of view—the staff, the patients, the hospital boards, and the architect, "NAIRN LINOLEUM" is the "RIGHT SPECIFICATION FOR HOSPITAL AREAS!" (Installed by Authorized Contractors, it is fully guaranteed.)

CONGOLEUM-NAIRN INC., KEARNY, N. J.

NAIRN
MADE IN U.S.A.
LINOLEUM
FLOORS & WALLS

ARCHITECTURE



During the eight months' existence of this department, architects have made free use of its invitation to "air their views on the type of advertising that is most useful to them." Criticism was sometimes severe and opinions often conflicted, yet there emerges in the summation of these expressions striking evidence that architects not only read advertising, but appreciate what it *can* do for them in the practice of their profession.



One thing that became apparent at the outset was the insistence of architects that advertising "speak their language"—that it offer information on the performance, appearance, application and cost of a product in concise and usable terms, without the frills intended for lay consumption.



In addition, these contributors pointed out other features they considered important. One was "clarity." They don't like vague copy, irrelevant illustrations or products that hide their identity behind tricky slogans or trademarks. Another thing they want is "brevity"—but this is more an indication that the average advertisement just isn't informative enough. Any ad, regardless of length, will be read so long as it's interesting and to the point. Also, "accuracy," particularly in illustrations, is considered vital. After all, it is largely by the use of the graphic arts that the architect earns his living!



Finally, architects answered specific questions. They said that they *did* find the use of models in advertising helpful for visualization providing they complemented the product; that they *were* pretty much in favor of "case history" advertising and that detail drawings were definitely desirable. But regarding the acceptability of manufacturers' free planning services they had some doubt, most architects feeling that, while some sort of help is desirable, the actual planning is their job.

Thus were these general reactions recorded. Subsequent investigation will be more specific. It will inquire into the profession's views on advertising as applied to particular *types* of building products such as fall, for example, into classifications like roofing, hardware, masonry, glass, and so on. Hence each month there will be presented answers of practicing architects to questions developed from actual advertising problems confronting the manufacturers concerned.

—RONALD ALLWORK

FREE PLANNING SERVICES

ROBERT S. HUTCHINS, AIA

WE DO NOT LIKE free planning service but find it necessary to use on cheap small jobs—for various reasons none of which can be gone into at this time.

General planning information by a manufacturer or for that matter by anyone would be valuable, but usually is impossible to lay one's hand on at the right moment. There are hundreds of planning documents in any architect's office—two or three of which are really useful and comprehensive. There is again as above, a large scope to this discussion.

WILLIAM C. STOHLBREIER, AIA

IN MY OPINION manufacturers of building materials or equipment should not offer free services of any kind. It educates the public to expect something for nothing, when we know you get nothing for nothing in the building industry. Such service jeopardizes the status of the architect and encourages unfair competition. The cost of such service is no doubt included in the cost of the product, which could be reduced if such practices were eliminated.

If manufacturers of building materials and equipment could be induced to include three simple words, "Consult an Architect," in all of their advertising, they would benefit materially. Architects would specify and insist on quality, and the sales of quality merchandise would increase. Potential house owners would not become the victims of speculative builders or jerry builders, where cost affecting profits is their first consideration and quality their last consideration.

MEETS ADVERTISING

NOT GENERALLY FAVORED BY ARCHITECTS WHO ANSWERED LAST MONTH'S QUESTION

The design, planning and erection of buildings belongs to the architects and engineers, and any interference on the part of manufacturers will soon eliminate the men who know and appreciate quality and its relation to maintenance costs versus the jerry builder whose only interest is price, eye appeal and sales with no regard for the purchaser's cost of maintaining inferior construction and equipment.

The manufacturer would also benefit materially by this type of advertising on maintenance, repairs, remodeling, etc. If the public were educated to "Consult an Architect" on all problems relative to their property improvements, the use of quality products would be insured and the day of the chiseler, misrepresentation and substitution of inferior products would soon cease.

A. MUSGRAVE HYDE, AIA

GENERAL PLANNING information and also specific layouts are always acceptable. Actually heating layouts in my offices are done by a consulting engineer.

WILLIAM E. HAUGAARD, AIA

A MANUFACTURER offering a free planning service involving the use of his equipment can neither serve the public with satisfaction or the engineer who seeks to serve his client's best interests.

A manufacturer's offer of general planning information is constructive because it creates public interest and gives the architect and engineer additional data for the solution of the specific problem.

GEORGE SPINTI, III, AIA

ONE CANNOT be informed enough in the new phases taking place in construction and building; therefore I believe any information from any informant in his particular branch should be acceptable either on his own product or general planning. The architect using the above information as a basis can change as to his requirements. I would prefer the data from the manufacturer and make our own layouts.

OLIVE TJADEN, AIA

IN ANSWER to the heating layout question, I have found that it is often expedient to consult with a boiler company on small work where funds are limited to the extent that a heating engineer cannot be employed. However, I always give them the idea of where to locate the boiler, radiators and especially the ducts for air conditioning, so game rooms, etc. are not disfigured. So it generally means in these cases that they, in conjunction with the heating contractor and myself, work out the boiler size and number of feet of radiation required, as I always insist on guarantees on these, and someone must be held re-

sponsible for them. The equipment company, it seems, is the logical one to assume it for their own products if they have been consulted about its installation.

About basement planning—no, I would never even consider a boiler company planning anything for me. That is entirely the architect's job, for which he is retained and paid by a client. Every trained architect has had some courses in heating as part of his education, and although we are not supposed to have the extensive knowledge of a heating engineer who specializes in only heating, I think we should know enough about heating to be able to locate chimneys, boilers, radiators, ducts and pipes in practical places; and still maintain any aesthetic effects we want to achieve without any help from a boiler company.

ROBERT F. SWANSON, AIA

LIMITED PLANNING and information service by manufacturers is certainly advisable and welcome but should be limited in scope to conform to practices of professions in which their material is used.

1. DO YOU AS AN ARCHITECT make it a practice to specify electrical supplies and equipment by name? Why?

2. WHAT IS YOUR GENERAL IMPRESSION of magazine advertisements featuring such items as electrical receptacles, outlet boxes, circuit breakers and wiring?

3. WOULD YOU BE INTERESTED in having check lists of electrical supplies and equipment for various types of buildings if offered by a manufacturer?

LET US HEAR FROM YOU

We'd like to publish your answer to these questions. Forms close September 20.

255 ft. ARCHES



Contractors—Tuller Construction Co. Engineers—Arch Roof Construction Co., Inc.

from deep WF Bethlehem Beams

The 255-foot arches in this recent construction job show an interesting application of Bethlehem wide-flange beams. Each arch was constructed from 18 individual straight sections of 33-inch, Bethlehem beams joined end to end. This patented arch design was developed by the Arch Roof Construction Co., Inc., of New York.

Bethlehem rolls a full line of shapes for all types of steel construction.



BETHLEHEM STEEL COMPANY

The shortest distance between



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This is due to *Typhonite*—a new form of natural graphite. The *Typhonite* process, exclusively Dixon's, creates incredibly minute, even particles in a typhoon of super-heated steam. These same particles flow from your Eldorado point in an even, opaque line that results in blueprints of extraordinary clarity. They bring brain, pencil point and paper closer than ever before.



PENCIL SALES DEPARTMENT 225-J9, JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY, N. J.

WHAT LIES AHEAD FOR BUILDING COSTS (Continued from page 40)

experience is cited to show that new building has gone forward in rent-controlled areas.

There is already a background of rent control efforts. Under the authority of the executive order that created it, OPACS has been setting up voluntary arrangements with local committees, has in fact issued a set of instructions for the development of local control groups. It is pointed

out that the price control bill does not make mandatory the application of legal rent control to any community, and that there will be plenty of scope for voluntary control groups. Some already are functioning.

At any rate, there appears to be definite recognition that there are plenty of problems in the application of rent control to prevent it from throwing a chill over building activ-

ity, and it seems to be fully accepted in official Washington that new construction, not rent control, is the final answer to the housing problem in defense areas.

Price ceilings for building materials

To date building materials prices have not been widely affected by price controls. The lumber industries have been scolded somewhat, it is true, and price ceilings have been announced for certain classes of lumber and plywood.

The ceilings so far are characterized as largely voluntary, but, as in industry generally, there has been little inclination to test the Administration's authority on priorities and price matters. So far there has been no official attempt to control retail prices; the ceilings apply to basic materials for manufacture or processing. The hope is that retail prices will keep in line with those of basic materials. It seems clear that if they don't the price control machinery will be extended.

The general policy now is to follow priorities orders in the fixing of price ceilings. When a material, such as copper, becomes subject to priorities orders, a price ceiling is established to prevent bidding up of prices of available supplies. A basic ceiling of 12 cents a pound was recently established for copper, and according to Mr. Henderson it has prevented copper prices from rising to as much as 17 or 18 cents.

Virtually all basic metals are now being watched in relation to priorities, and price controls may be expected. It is not unlikely that manufactured products made of metal—plumbing, for example—will come in for attention later on, when the metals pinch gets tighter. As now contemplated, price ceilings will take account of changes in cost of production and transportation.

Building cost increases not great

While there has been much talk of advancing building costs, latest available statistics indicate that building material cost increases have been smaller than those of many other prices. And they have been narrower than in World War I. Mr. Hen-

(Continued on page 104)

PAGE FENCE

America's First Wire Fence—Since 1883



100% INTEREST IN THE INVESTMENT

★ "Protection Now" is Uncle Sam's 1941 theme song—and also the professional advice of architects to their business clients. Fence protection is a functional "must," and investment protection is also essential.

Page Fence distributors are local, responsible business men engaged in fence engineering, erecting and servicing. These capable specialists own their own plants; have had many years of experience, and operate crews of skilled, factory-trained men. These 102 firms have a permanent, 100% interest in every job they handle.

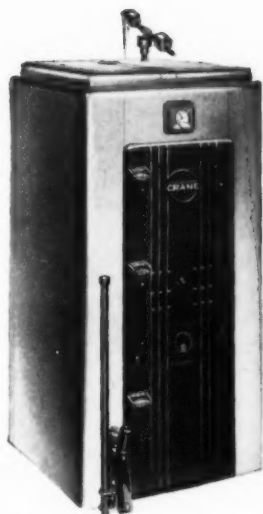
One of these experts is located conveniently near you. Consult him. He knows

local conditions affecting fence investments and will recommend the fence best suited to any need. He will tell you of Page's stronger Winged Channel Posts, specially developed for use with chain link fence—just one of many exclusive features.

See Sweet's Catalog for detailed information, and write to PAGE FENCE ASSOCIATION, Monessen, Pa., or Bridgeport, Conn., New York, Pittsburgh, Atlanta, Chicago, Denver, San Francisco, for Page Industrial and Residential Fence Books.



A PRODUCT OF PAGE STEEL & WIRE DIVISION—AMERICAN CHAIN & CABLE COMPANY, INC.



The Crane No. 10 boiler for steam or hot water heating. Burns all types of fuel economically. May be installed for hand firing and later converted to oil or stoker firing.



Basmer No. 25 gas-fired boiler. This handsome boiler is small in size, yet high in efficiency. Patented staggered heat travel assures the absorption of all heat units delivered by the fuel, thus preventing waste. Jacketed in steel, baked-on enamel finish.



The Crane No. 16 boiler is the last word in automatic heating. It incorporates the sustained heat principle which assures the utmost heat from the fuel burned. A handsome steel jacket encircles both boiler and oil burner which are designed to work together for maximum efficiency!

HERE'S Better Heating FOR THE "IN-BETWEEN" HOME



● Not small—not large—many homes enter a middle class which might be called medium sized.

Some of these homes are in coal-burning territories, some where gas is plentiful—others where oil is the preferred fuel.

After studying heating needs in such a home, you may specify a Monoflo hot water system—or a one-pipe steam system—or perhaps you may decide that a two-pipe system is best.

No matter!

In the Crane line you will find boilers exactly tailored to your special requirements—boilers for every fuel—boilers for every size home. You are never at a loss for the *right* heating system in the Crane line—"the line that has everything."

CRANE

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVENUE, CHICAGO
VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

derson, in his statements before the House committee, cited a few comparisons of price advances in the first 22 months of each war period, as follows:

Prices	World War I	World War II
Farm	10%	24%
Textiles	21%	25%
Building materials	28%	13%
Metals and metal products	52%	6%
Chemicals and drugs	23%	14%

As for over-all costs of residential construction, the Federal Home Loan Bank Board's figures on costs of building a standard six-room house showed an increase from June 1940 to June 1941 of 10 per cent. Despite this jump, the Board's statement points out, the index of the volume of residential building was 50 per cent higher this June than last, and 16 per cent higher in June than in

May of this year. Separating the increase as between labor and materials, the Board gave an advance of material prices of 7.8 per cent, while labor increased 14.6 per cent.

Another index of construction costs, including other types than residential building, is given in considerable detail on pages 33 and 34.

For wholesale prices of building materials the Bureau of Labor Statistics gives the trend since the beginning of this war period, in August 1939, as a rise, then a slow decline, then another rise starting about a year ago with the beginning of the cantonment construction program. The swing in the general average of all building material prices was largely due to lumber changes. The first advance, largely speculative, carried to the end of 1939. The second advance, again largely caused by lumber prices, came following June 1940. The table shows how small the advances have been, for most basic material items, between August 1939 and June 1941.

Index Numbers of Wholesale Prices of Building Materials, 1926 Base

	August 1939	June 1941
BUILDING MATERIALS	89.6	101.0
Brick and tile	90.5	92.5
Cement	91.3	91.9
Lumber	91.8	117.6
Paint and paint materials ..	82.1	90.3
Plumbing and heating	79.3	83.1
Structural steel	107.3	107.3
Other building materials ..	89.5	96.9

These are national averages, of course, and do not show local price dislocations, which according to scattered reports have been rather severe. Nor do they show such price dislocations as might come with bootlegging of restricted items. Drastic labor shortages are another factor that might well shoot costs upward in a particularly active locality. Still another factor, not shown in average costs, is the fear element in a bid quotation, representing the contractor's desire to protect himself against future uncertainties.

By and large, however, while the general trend of building costs appears upward, and may show considerable disparities as between local conditions and national averages, the price situation ahead for building does not look especially disturbing.

Perpetuate *Beautiful* floor designs in **LIFETIME TERRAZZO**

Why labor over well-thought-out floor designs and then sentence them to a limited existence? Your designs deserve better treatment—they deserve to last—and they will, in lifetime terrazzo. In this better floor material colors improve with age. Terrazzo does not break out in a rash of holes, or become discolored in spots of heavy traffic. It needs no costly refinishing, waxing, repairs or replacement—that's why it has the lowest cost per foot per year. Besides, terrazzo is sanitary, easy to clean, inviting, practically non-absorbent, in fact terrazzo has everything. Give your floor designs a break—let them live for the future—perpetuate them in lifetime terrazzo. For latest information see our catalog in Sweet's or write

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 **Terrazzo Floors** **LOWEST COST**
PER FOOT PER YEAR

BY THE MAKERS OF *uni-flo* GRILLES AND REGISTERS



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AIR DIFFUSER

RECESSED MODEL

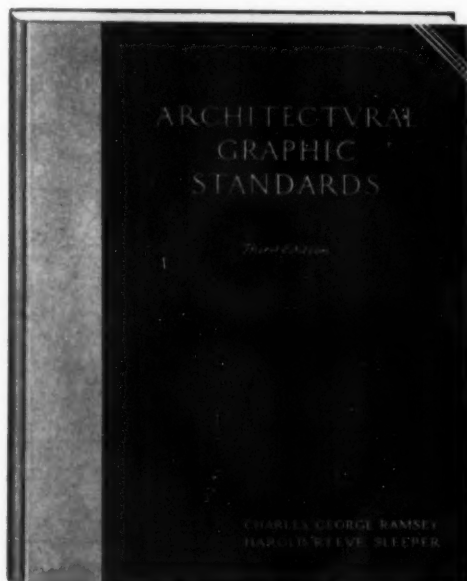


For specifications of all UNI-FLO and VENTURI-FLO units, write for descriptive literature. Complete data also in SWEET'S CATALOG FILE (Architectural).

- ★ Deflector form of ceiling member minimizes streaking by giving the air stream a slight downward direction.
- ★ Overall diameter is approximately $\frac{1}{3}$ smaller than other models. For example, 10" throat size is 9" overall.
- ★ Modification in design results in lower pressure drop through the diffuser.
- ★ A wider range of sizes is now available.

1232 ROCK ST. **BARBER-COLMAN COMPANY** ROCKFORD, ILL.

Here it is, in revised form—the "must" book for **ARCHITECTS**
 ... for **BUILDERS**
 ... for **DRAFTSMEN**
 ... for **ENGINEERS**



RAMSEY and SLEEPER'S "ARCHITECTURAL GRAPHIC STANDARDS," now thoroughly revised, is of greater use and value than ever before. Information in graphic form which it would take years to assemble from blueprints, pamphlets, magazine sheets and personal notes is accurately presented here in its proper order, in compact space, indexed and cross-indexed for easy reference. The third edition contains 315 plates and 25 pages of index including over 5000 items, counting cross-references. All but 4 plates have been revised, and 75 plates are entirely new. The new book is some 24% larger than the previous edition, and 48% larger than the first edition, yet the price remains the same (\$6.00). For those interested in landscape work, a series of three sheets of tree and shrub silhouettes showing species, sizes, and spacing, including all the most commonly used types, is presented comparatively, in a manner not previously attempted. Park equipment is also presented. Other new subjects covered include: Brick Cavity Walls, Serpentine Walls, Walls According to the New York Building Code, Glass Blocks, Termite Control, Skylights, Safety Treads and Nosings, Metal Railing and Post Attachments, Structural Glass, and Sound Insulation.

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3rd Edition (July, 1941)

PRICE, \$6.00

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NEWS OF MATERIALS AND EQUIPMENT

(Continued from page 96)

Heating and Cooling in One

HEATING and conditioning in winter, cooling in summer is the dual function of a gas-fired air conditioner said to have been proved by 5 years of laboratory tests and field installa-

tions. For cooling, atmospheric steam from the steam generator is diverted to the refrigeration generator where it operates the absorption refrigeration cycle. Water is used as the refrigerant. Differences in temperature and height of columns cause circulation of the refrigerant and solvent in



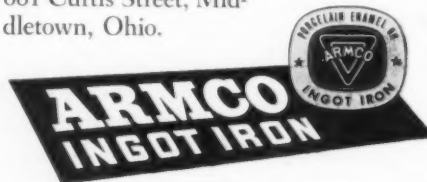
• IN YOUR new-house plans, a woman is concerned with the arrangement and styling of the bathroom.

With *Formed Iron Plumbing Ware*, you can offer her smartly designed fixtures in white porcelain enamel or in gay pastels. The high-luster surfaces are lastingly beautiful, easy to clean, and are acid-resisting at no extra cost.

When *Formed Iron Ware* is porcelain enameled on ARMCO Ingot Iron, you can assure your clients of the finest basic quality. They will know it, because twenty-seven years of

national advertising have created a ready acceptance for this "world's standard enameling iron."

Now you also can supply the bathroom with clear, sparkling hot water from a tank that is porcelain enameled inside on ARMCO Ingot Iron. For further information, write to The American Rolling Mill Company, 661 Curtis Street, Middletown, Ohio.



the system, eliminating entirely the need for valves, pumps and moving parts. Servel, Inc., Evansville, Ind.

Gives Instantaneous Fluorescent Light

NOW COMES a power unit, assembled as part of a fluorescent lighting fixture, that provides instantaneous light when switched on. The unit also eliminates need for starters, starter switches, starter sockets and compensators. Operating on a patented principle, it is said to reduce cyclic flicker to a minimum, operate quietly without radio interference. Guaranteed for one year, it is so constructed that it cannot overheat or be seriously damaged by overloading. Available in leading makes of fixtures. National Transformer Corp., 224-232 21st Ave., Paterson, N. J.

Non-Rusting Wall Ties

A HIGH-STRENGTH, non-rusting wall tie for cavity brick walls is made of wire having a steel core protected against corrosion by a welded-on covering of pure copper. Standard ties for 10-in. cavity brick walls are 6 in. long overall with 3-in. or 13/4-in. opposite right-angled anchor legs. Copperweld Steel Co., Glassport, Pa. (See figure 2.)



Figure 2

Shatter-Proof Plastic Moldings

A SHATTER-PROOF TRIM for furniture, the first, it is claimed, that can be applied without the use of fasteners or an adhesive, is made of the new plastic, tenite. It comes in different

(Continued on page 108)

WANTED!

Architects Who are Hard-Boiled!

Yes—hard-boiled! Because, the Architect who will not compromise with quality can easily satisfy himself that Fluorescent Fixtures by Day-Brite are engineered and built to merit that complete confidence which is every Architect's "priceless ingredient."

We welcome, therefore, an exacting, hard-boiled approach to Fixtures by Day-Brite—a detailed, rigid comparison of every feature of Day-Brite design, Day-Brite engineering, Day-Brite long-life construction.

Here, for example, is a typical feature of Day-Brite Troffer design—minor to the layman—BUT IMPORTANT TO YOU—and therefore important to Day-Brite!

YOU GET A Blanket of Illumination WITH DAY-BRITE TROFFERS



Note that Troffer sides are flared at an angle radial to the lamp, to form the "Blending Section." This provides a smooth light transition from the fixture to the ceiling—eliminating visible glare from the normal angle of vision.

Get detailed layout suggestions and complete blueprint recommendations from Day-Brite... your local Day-Brite engineering representative is available for consultation... write Day-Brite.

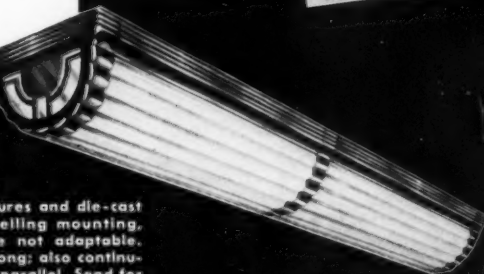
19

Day Brite
RIVALS DAYLIGHT
THE Complete Line of
Fluorescent Lighting Fixtures



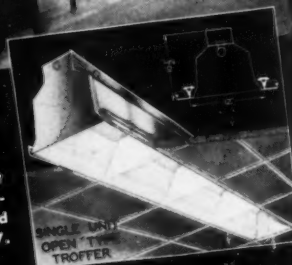
The KINGSWAY

Fluted-glass enclosures and die-cast ends, for direct ceiling mounting, where troffers are not adaptable. Units, 2 and 8 ft. long; also continuous 2 and 3 lamps parallel. Send for Bulletin F-48.



Above... Illustrating a Typical Day-Brite Troffer Installation.

Right... Single-unit Open-type Day-Brite Troffer. Send for Bulletin F-47.



NATIONALLY DISTRIBUTED THROUGH ALL LEADING ELECTRICAL SUPPLY HOUSES

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NEWS OF MATERIALS AND EQUIPMENT

(Continued from page 106)

lengths and shapes for finishing edges of tables, counters and cabinets, and can be punched, nailed, stamped, drilled or sawed. Forced into a groove cut in the wood, a flanged arrow portion of the strip prevents the plastic from loosening. Other strips

of tenite can be used for concealing seams in wall-covering materials such as plywood, linoleum, plaster, metal and glass. It can be cleaned in the same manner as adjacent material, and a surface scratch, according to the manufacturer, can be made practically invisible by polishing with

wax. The molding is also said to be virtually unaffected by ordinary temperature and humidity changes. In a range of chip- and wear-proof colors. Extruded Plastics, Inc., Naugatuck, Conn.

Metal Lath for Defense

THE TOUGH STRANDS of steel which form the 1,400 openings in a sq. ft. of metal lath weigh only six ounces. Yet because of the shock- and shatter-proof qualities of metal lath, demonstrated by years of resistance to earthquake, fires, hurricanes and floods, plus its possibilities for space-saving both in construction and in transportation, this product is seeing widespread essential service in defense building. Architects are invited to make use of the facilities of a Service Bureau, where a fund of experience and information is at their disposal. Metal Lath Manufacturers Association, 208 S. La Salle St., Chicago, Ill.

Glossy Wallboard for Bath and Kitchen

PREFINISHED wall materials now include one with glossy finish that is said to be highly practical for bathrooms and kitchens—durable, easily cleaned with a damp cloth, resistant to steam and water. Sheets come in 4-by-8-ft. plain; 4-by-8-ft. with horizontal scoring; and 4-by-4-ft. with 12-by-12-in. box scoring. Eight colors. Johns Manville, 22 E. 40th St., New York City.

Fluorescent Fixture

FOR DIRECT MOUNTING on low or high ceilings is a new fluorescent fixture that comes in various lengths from 2 to 8 ft., with 40 to 240 voltage. The 2-ft. fluted glass cylinders are said to be easily removed. Day-Brite Lighting, Inc., 5489 Bulwer Ave., St. Louis, Mo.

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★ Well-known church in Washington, D. C., where three 42" ILG Self-Cooled Motor Propeller Fans are providing delightful air conditions.



Because ILG Vitalized Ventilation ends stuffiness in winter, provides a cooling effect in summer . . . *because* quiet operation avoids disturbing noises . . . *because* ceiling grilles blend with the decorative scheme . . . *because* all of the above advantages are combined with low cost installation and operation. For case history on this and 26 other noted ILG installations, phone or write today for free copy of "Sensible Ventilation". Or see ILG ad in Sweet's.



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VENTILATION
AND AIR CONDITIONING

★ AIR CHANGE...NOT JUST AIR MOVEMENT!★

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Figure 3